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ABSTRACT

The literature is reviewed on three curriculum models that were developed to help economically disadvantaged youngsters overcome the consequences of poverty and prepare for the academic challenges they would face in later years. The first section of the paper presents a historical overview of the developments in compensatory preschool education during the last 3 decades as they relate to three curriculum models: the child-centered, direct instruction, and open-framework curriculum models. The second section describes the direct instruction and open framework curriculum models as they are currently practiced and implemented in the schools. The discussion includes a comparison of the three approaches and an evaluation of the advantages and disadvantages of each in terms of the specific needs of the economically disadvantaged child. Arguments curently made by proponents and opponents of the models are included. The third section discusses limitations in the experimental design of research on the subject of curriculum models for economically disadvantaged preschoolers. Further, this section discusses those aspects of the subject which have been either completely omitted from the literature or which have not been studied in sufficient depth. Finally, new trends and directions in the field of compensatory preschool education are examined, which relate to the three curriculum models under consideration. (RH)

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A COMPARISON OF THE CHILD-CENTERED CURRICULUM MODEL, THE DIRECT INSTRUCTION CURRICULUM MODEL, AND THE OPEN-FRAMEWORK CURRICULUM MODEL: THREE CURRICULUM MODELS FOR DISADVANTAGED PRESCHOOL CHILDREN

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ABSTRACT

During the 1960's, numerous preschool curriculum models were developed to help economically disadvantaged youngsters overcome the consequences of poverty and thereby prepare for the academic challenges they would face in later years. This review of the literature will consider research dealing with three such curriculum models: the Child-Centered Curriculum Model, the Direct Instruction Curriculum Model, and the Open-Framework Curriculum Model. For the purposes of this research paper, the term **preschool children** will refer to youngsters between three and five years of age. The term **economically disadvantaged** will be used to describe those youngsters who, as a result of having been reared in poverty, have not acquired the background of experiences which are prerequisites of academic success and who are, therefore, at risk of school failure. With respect to the three curriculum models, the following definition of terms will prevail. The **Child-Centered Curriculum Model** represents the philosophy of the traditional nursery school program and emphasizes children's social and emotional growth. In this approach, the child typically initiates the learning activities, and the teacher supports and reinforces these child-initiated activities. The **Direct Instruction Curriculum Model** emphasizes the development of children's academic competence. It was conceived as a systematic and structured method of developing and maintaining academic skills. In this

approach, the teacher initiates learning activities by presenting stimuli which are designed to bring forth specific responses from the child. The **Open-Framework Curriculum Model**, in which the teacher and child both plan and initiate activities, emphasizes both the intellectual and social development of the child. It is based upon the premise that children learn most effectively when they play an active role in the learning process and when they plan for and carry out their own educational experiences.

The first section of this research paper will present a historical overview of the developments in compensatory preschool education during the last three decades as they relate to the three curriculum models designated for comparison by this research project. Initially, early childhood educators sought to ascertain the inherent value of a preschool education for economically disadvantaged youngsters. Since the Perry Preschool Project was one of the most extensive and well-executed longitudinal studies conducted for the purpose of assessing the benefits of a preschool experience for economically disadvantaged youngsters, it will be discussed at length in terms of its experimental design, implementation, and conclusions.

Once the efficacy of preschool programs for disadvantaged youngsters was confirmed by the findings of studies such as the Perry Preschool Project, educators began to compare the relative effectiveness of various curriculum models to establish

which ones were most suitable for children from low-income families. The following curriculum models have been the subject of great interest and debate during the last three decades: the Child-Centered Curriculum Model, the Direct Instruction Curriculum Model, and the Open-Framework Curriculum Model. These curriculum models exemplify the diversity in curriculum emphasis, instructional methodology, and conception of learning that has existed in the field of early childhood compensatory education. Therefore, this paper will present a discussion of the major features of each of these curriculum models as they were practiced during the last three decades.

The last part of the historical overview will consider the findings and conclusions of two extensive longitudinal studies, the High/Scope Preschool Curriculum Study and Project Follow Through. These research projects were designed to compare the long-term effects of the different curriculum models and to ascertain whether one curriculum model was more likely to produce beneficial results for children from low-income families. A major focus of this discussion will concern the implications which the results of these studies have with respect to planning preschool programs for economically disadvantaged children who are at-risk of school failure.

The second section of this research paper will contain a description of the three curriculum models as they are currently being practiced and implemented in the schools. This discussion will include a comparison of the three approaches

and an evaluation of the advantages and disadvantages of each in terms of the specific needs of the economically disadvantaged child. Moreover, arguments which are currently being presented by both the advocates and opponents of each of the curriculum models will be included.

Current educational research contains an overwhelming amount of information dealing with compensatory preschool education. The many excellent textbooks and journal articles on the subject present a strong rationale for preschool programs for disadvantaged children. In addition, there are numerous comparative studies designed to evaluate the effectiveness of each of the curriculum models being discussed in this paper. However, a judicious and objective review of the literature does reveal some components of experimental design which require improvement and several aspects of the topic in which research is lacking. Therefore, the final section of this research paper will involve a discussion of the limitations in experimental design of research on the subject of curriculum models for economically disadvantaged preschoolers. In addition, this section will include a discussion of those aspects of the subject which have either been completely omitted from the literature or which have not been studied in sufficient depth. Finally, new trends and directions in the field of compensatory preschool education which relate to the three curriculum models under consideration will be examined.

HISTORICAL OVERVIEW

During the last three decades, early childhood development programs have been carefully studied and evaluated to assess their effectiveness in helping economically disadvantaged youngsters overcome the consequences of poverty and thereby achieve academic success. In the early 1960's, educators of preschool children became acutely aware that, when compared to middle-class youngsters, economically disadvantaged youngsters were more likely to encounter difficulty in acquiring the skills, attitudes, and abilities essential for a favorable academic experience in the primary grades. These educators recognized that the skills, concepts, and abilities which a child masters as a preschooler have a direct influence on that child's chances for success when he begins first grade. Therefore, during the 1960's, numerous preschool programs were developed to help the economically disadvantaged child overcome the detrimental effects of deprivation and prepare for the academic challenges he would inevitably face when he entered first grade. In evaluating these preschool programs, early childhood educators addressed themselves to the following fundamental question: Does preschool education help economically disadvantaged youngsters develop the language, cognitive, social, and emotional skills which are vital to a positive academic experience in later years? On the basis of the results of numerous short-term and long-term studies, these educators concluded that compensatory

preschool programs are indeed beneficial in offsetting the negative effects of poverty and in improving the life chances of economically disadvantaged youngsters. Thus, early childhood educators determined that, by providing compensatory education for economically disadvantaged preschool children at risk of school failure, many intellectual, social, and emotional problems could be prevented or at least diminished in severity when these children entered the primary grades.

Numerous studies have been conducted to ascertain the inherent value of a preschool experience for economically disadvantaged youngsters. These studies have involved comparisons of the short-term and long-term performance of youngsters who attended a preschool program with the performance of those who did not attend a preschool program. In evaluating the benefits of attendance versus non-attendance in a preschool program, researchers have considered factors such as intellectual performance, placement in special education programs, the incidence of retention, the high school drop-out rate, the frequency of delinquent acts and of teenage pregnancies, the unemployment rate, and the incidence of welfare dependence.

One of the most extensive and well-executed studies conducted for the purpose of assessing the benefits of a preschool experience for economically disadvantaged youngsters is the Perry Preschool Project. According to Schweinhart & Weikart (1980), the Perry Preschool Project was initiated in 1962 to investigate the long-term effects of participation versus

non-participation in a high quality preschool program for disadvantaged children. In "Changed Lives: The Effects of the Perry Preschool Program on Youths Through Age 19", Berrueta-Clement, Schweinhart, Barnett, Epstein, & Weikart (1984) explain the process of selecting children for the study. The sample population chosen to take part in the study consisted of 123 black three-and four-year-olds who came from low-income families and who were at-risk of school failure. These children lived in a neighborhood of Ypsilanti, Michigan which was largely populated by low-income black families and which was loçated within the school district of the Perry Elementary School. In a carefully-planned screening process, children were identified as potential candidates for participation in the study from a census of families with children already in attendance at the Perry Elementary School, by referral from social service groups in the area, and by a door-to-door search. After the children were selected as possible participants, their families were evaluated for socioeconomic level, which was assessed on the basis of the scholastic history of the parents, the wage earner's level of employment, and the ratio of number of rooms to number of people living in the household. Those children who came from families below a designated socioeconomic level were then administered the Stanford-Binet Intelligence Test. On the basis of this testing, children with IQ scores between 60 and 90 who presented no symptoms of organic abnormality were chosen for participation in the study.

Berrueta-Clement, et al. (1984) explain the assignment of children to experimental and control groups. These authors emphasize that the "... scientific strength of this study, its ability to determine preschool effects twenty years afterwards, is due primarily to an experimental design in which study subjects were randomly assigned" (p. 18) to an experimental group which participated in a high quality preschool program and a control group which received no preschool intervention. According to Schweinhart & Weikart (1980), in assigning the youngsters to either the experimental group or the control group, the utmost care was exercised to match them as closely as possible for pretest IQ score, age, sex, and socioeconomic level. As a result, the two groups were comparable in terms of both the background of the children and the relevant aspects of family background. With respect to characteristics of the children, both the experimental group and the control group were comparable in ratio of boys to girls, age at entry, size of family, birth order, and pretest IQ score (Schweinhart & Weikart, 1980). The family background of the two groups was comparable with respect to socioeconomic status, highest scholastic level attained by parents, the ratio of two-parent to single-parent families, welfare status, employment level of the working parent, and household density (Schweinhart & Weikart, 1980).

The children in the experimental group attended a high quality preschool program five mornings each week for a total of thirty weeks (Weikart, 1985). In addition, a staff member

made a ninety-minute teaching visit at the child's home one afternoon a week (Weikart, 1985). The curriculum of the preschool program, a Cognitively Oriented Preschool Curriculum, was inspired by the psychological theories of Jean Piaget (Weikart, 1985). According to Weikart (1985), in this curriculum model, the child initiates his own learning activities within a framework formulated by the teachers to support such activities. Weikart (1985) explains that the basic precept of the curriculum necessitates that each child formulate a daily plan which he dictates to the teacher. After the teacher has translated the child's orally expressed plan into written form, the child has the responsibility of carrying out his plan during an hour-long work period and of evaluating what he has accomplished at the conclusion of that work period (Weikart, 1985). Weikart (1988) points out that this "... plan-do-review cycle develops children's initiative, sense of responsibility, problem-solving ability, social cooperation, and individual competence in a variety of psychomotor and intellectual skills" (p. 30).

The progress of the children in both the experimental and control groups was studied and evaluated on an annual basis from ages three to eleven and then again at ages fourteen, fifteen, and nineteen (Berrueta-Clement, et al., 1984). The major areas of assessment of the Perry Preschool Study included school success, placement in special education programs, educational attainment, school performance and attitudes, and

social responsibility. Berrueta-Clement, et al. (1984) describe the effects which participation in the preschool program had on school success. In general, Berrueta-Clement, et al. (1984) report that participants in the preschool program enjoyed greater success in school because they received higher achievement test scores, higher grade-point averages, and fewer failing grades. In addition, according to Berrueta-Clement, et al. (1984), parents of children who had participated in the preschool program expressed greater satisfaction with their children's school performance. Moreover, these researchers explain that children who had taken part in the preschool program demonstrated a greater commitment to schooling by their expression of more positive attitudes toward high school, lower incidence of absence, and more favorable school behavior. These authors also point out that individuals who had participated in the preschool program spent less time in special education programs and were more likely to graduate from high school and attend college or a vocational school after high school graduation. Berrueta-Clement, et al. (1984) conclude that, as a result of the decreased need for special education services, the per-pupil costs of elementary and secondary education were markedly reduced.

Schweinhart & Weikart (1980) describe the effects which participation in a preschool program had on school performance and attitudes. They explain that, during the preschool, kindergarten, and first grade years, children's IQ scores

improved as a result of the preschool experience, but that the IQ scores of both the experimental and control groups were essentially the same by the second grade and remained so from that point on. In addition, according to Schweinhart & Weikart (1980), preschool participants received higher teacher ratings than non-preschool participants for academic motivation. These authors report that, when interviewed at age fifteen, students who had participated in the preschool program expressed higher value for schooling, had greater hopes of pursuing a college education, demonstrated a greater inclination to discuss school activities and plans with their parents, spent more time doing their homework, and expressed more confidence in the likelihood of their achieving success in school. Schweinhart & Weikart (1980) also found that parents expressed greater satisfaction with their child's academic progress.

According to Berrueta-Clement, et al. (1984), participation in the preschool program also had a positive influence on the development of social responsibility. For example, these authors report a lower incidence of crime and fewer delinquent acts among those youths who had taken part in the preschool program. A smaller number of these youths were arrested or sent to juvenile court, and, in general, these youths spent less time on probation and received fewer fines as adults (Berrueta-Clement, et al., 1984). Among female teenagers who had been part of the preschool group, there were fewer pregnancies and births through age nineteen (Berrueta-Clement, et al., 1984).

Thus, there was a positive correlation between participation in the preschool program and the reduced incidence of antisocial behavior and misconduct.

Berrueta-Clement, et al. (1984) summarize the conclusions of the Perry Preschool Project:

> Results to age nineteen indicate lasting beneficial effects of preschool education in improving cognitive performance during early childhood; in improving scholastic placement and achievement during the school years; in decreasing delinquency and crime, the use of welfare assistance, and the incidence of teenage pregnancy; and in increasing high school graduation rates and the frequency of enrollment in postsecondary programs and employment. (p. 12)

The following table illustrates the major findings of the Perry Preschool Study:

Table 1 MAJOR FINDINGS AT AGE 19 IN THE PERRY PRESCHOOL STUDY

Category	Number* Responding	Preschool Group	No-Preschool Group
Employed	121	59%	32%
High school graduation (or its equivalent)	121	67%	49%
College or vocational training	121	38%	21%
Ever detained or arrested	121	31%	51%
Females only: teen pregnancies, per 100	49	64	117
Functional competence (APL Survey: possible score 40)	109	24.6	21.8
% of years in special education	112	16%	28%

*Total n = 123

(Berrueta-Clement, et al., 1984, p.12)

Thus, longitudinal studies, such as the Perry Preschool Project, demonstrated that high quality preschool programs are indeed beneficial in improving the life chances of economically disadvantaged children.

Once the efficacy of preschool programs for disadvantaged youngsters was confirmed by research, educators began to study and compare the relative effectiveness of various curriculum models and approaches to establish which ones were most suitable for children from low-income families. Numerous early childhood curriculum models for disadvantaged preschoolers emerged during the 1960's and were the subject of great interest and debate during that decade as well as during the 1970's and 1980's. Although each curriculum model was dedicated to revising the concept of readiness in terms of the unique problems and needs of economically disadvantaged youngsters, there were significant differences in the curriculum emphasis, instructional methodology, and conception of learning to which they adhered. According to Powell (1986), the most significant differences in these instructional approaches "... reflect diverse assumptions about how children learn and the role of teachers in guiding or structuring the learning process" (p. 60). For example, while some curriculum models advocated an academically-oriented, teacher-directed approach, others favored a child-centered learning environment in which the child initiated and planned activities and in which the focus was on emotional and social growth. The following curriculum models exemplify the

diverse philosophies for educating disadvantaged preschoolers which emerged during the 1960's: The Child-Centered Curriculum Model, the Direct Instruction Curriculum Model, and the Open-Framework Curriculum Model. The discussion which follows will present a description of the salient features of each of these curriculum models as they were practiced during the last three decades. The results and conclusions of several longitudinal studies which were designed to compare the relative effectiveness of each of these curriculum models will also be discussed. A major focus of this discussion will concern the implications which these findings have with respect to planning preschool programs for children of low-income families who are at-risk of school failure.

The Child-Centered Curriculum Model represents the philosophy of the traditional nursery school program and exemplifies the methodology which has historically been considered good nursery school practice (Weikart & Schweinhart, 1986). According to Weikart (1972), in this approach, the child typically initiates the learning activities, and the teacher supports and reinforces these child-initiated activities. Thus, the teacher is responsive to the expressed needs and interests of the children. Weikart (1972) explains that, to promote child-initiated learning, the teacher encourages the children to actively engage in free play both with their classmates and on an individual basis. Indeed, "... there is a firm commitment to the idea that 'play is the child's work' and recognition

of the importance of the child's active involvement in his environment" (Weikart, 1972, p. 36).

Although the Child-Centered Curriculum Model focuses on the development of the "whole child", Weikart (1972) points out that the major emphasis is on promoting social and emotional growth. A great deal of attention is given to social adjustment and emotional growth through fantasy play, imitation of adult roles, practice of life skills, experiences in relating to peers, and judicious development of the child's ability to become independent of the direct assistance of adults (Weikart, 1972). Moreover, the Child-Centered approach to preschool education aims to foster independence, creativity, self-discipline, and positive relationships with one's peers (Weikart, 1972).

Proponents of the Child-Centered Curriculum Model advocate a classroom atmosphere which is open and free and a relationship between teacher and child which is relaxed and permissive (Weikart, 1972). Based upon her knowledge of child development, the teacher creates a supportive milieu in which learning results from the child's interaction with his peers, with manipulative materials, and with the teacher herself (Weikart, 1972). Curriculum content generally includes topics of interest and concern to the children, such as seasons of the year, holidays, and community workers. Although there is a consensus among advocates of a Child-Centered Curriculum with respect to the major objectives to be achieved, the specific curriculum content and activities for each class are created by the teacher based

on her interpretation and understanding of the principles of child development and her assessment of the needs of the children in her class (Weikart, 1972). Thus, the major strength of the Child-Centered Curriculum Model is that it is readily adaptable to suit the needs of individual children.

Weikart (1972) summarizes the basic precepts of the Child-Centered Curriculum Model:

> The hallmark of the Child-Centered curricula is an open classroom with children free to express their individual interests and help create their own environment, with a careful response by an experienced and intuitive teacher who has developed a sense of how to support this creative environment. (p. 36)

The Direct Instruction Curriculum Model emphasizes the development of children's academic competence. According to Mathes and Proctor (1988), the Direct Instruction approach to learning was conceived as a systematic and structured method for developing and maintaining academic skills. The teacher initiated learning activities by presenting stimuli which were designed to bring forth specific responses from the child (Heilman, Blair, & Rupley, 1986). Proponents of Direct Instruction for very young children contend that, since many preschoolers from low-income families come to school with fewer academic skills and concepts than their more advanced peers, intensive academic intervention during the preschool years is essential.

The concept of the direct-instruction approach to preschool education was first introduced by Bereiter and Engelmann (1966)

in Teaching Disadvantaged Children in the Preschool. In this book, Bereiter and Engelmann (1966) present the argument for a radical new curriculum model for disadvantaged preschoolers. These authors believe that, because of poverty and deprivation, economically disadvantaged preschoolers are significantly behind their more advantaged peers in the development of skills, attitudes, and abilities that are necessary for success in the primary grades. Moreover, Bereiter and Engelmann (1966) contend that, if these youngsters do not quickly acquire these skills and abilities, they will begin first grade with a significant handicap which will cause them to be at great risk for school failure in later years. Therefore, these educators conclude that, in order to overcome skill deficits, disadvantaged youngsters must learn those skills which are vital for success in school at a faster, more intense pace than is customary at the preschool level. In addition, Bereiter and Engelmann (1966) assert that the curriculum content of the traditional nursery school, with its emphasis on the development of social and emotional skills, is not compatible with the objective of rapidly teaching the cognitive skills which the economically disadvantaged child must acquire if he is to overcome the deficiencies in skill development which are a function of his poverty. For this reason, Bereiter and Engelmann (1966) urge that educators who plan a compensatory preschool program for disadvantaged youngsers be selective in their choice of curriculum content and emphasize direct instruction in those

academic skills which the child seriously lacks and which are prerequisites for success in school.

Gersten, Woodward, and Darch (1986) state the basic philosophy of the Direct Instruction approach to learning: "For all students to learn, both the materials and teacher presentation of these materials must be clear and unambiguous" (p. 18). Mathes and Proctor (1988) summarize the basic components of the Direct Instruction Curriculum Model which was originally conceived by Bereiter and Engelmann and which was later exemplified by the DISTAR direct-instruction preschool program in 1969. According to Mathes and Proctor (1988), the Direct Instruction Curriculum Model required the presentation of carefully-sequenced, teacher-directed lessons which were pre-scripted with both the exact words to be spoken by the teacher and with the child's likely responses. The teacher presented these lessons to small groups of from five to ten students and used a system of signals for prompting the choral responses of the children to her questions (Mathes & Proctor, 1988). Essential features of direct-instruction were extensive positive reinforcement and the immediate correction of children's errors (Mathes & Proctor, 1988).

Mathes and Proctor (1988) explain the rationale for the procedures employed in a direct-instruction approach to learning. According to Mathes and Proctor (1988), in the Direct-Instruction Curriculum Model, instruction in academic skills was carried out in small groups so that the teacher could easily evaluate

pupil progress and so that there would be extensive interaction between the teacher and the students. These authors point out that children's choral responses to teacher questioning resulted in a high frequency of pupil participation and numerous opportunities for every child to practice the target skill during each instructional period. Mathes and Proctor (1988) explain that the teacher's system of signals, which were in the form of visual or auditory cues, told the child when to respond and resulted in all pupils responding in unison to each of the questions. In this way, the teacher was able to monitor each child's errors and provide immediate corrective feedback. New academic skills and concepts were not introduced until the children in the group had mastered the previous skill to a designated level of accuracy (Mathes & Proctor, 1988).

The Open-Framework Curriculum Model, in which the teacher and child both plan and initiate activities, is exemplified by the Cognitively Oriented Curriculum. This educational approach emphasizes both the intellectual and social development of the child. It is based upon the premise that children learn most effectively when they play an active role in the learning process and when they plan for and carry out their own educational experiences (Weikart, Rogers, Adcock, & McClelland, 1971).

According to Weikart (1986), teachers who advocate a Cognitively Oriented approach to learning are guided by the following fundamental objectives:

1. To encourage children to make choices and decisions for themselves.
2. To develop children's self-discipline and ability to persevere in accomplishing self-selected goals.
3. To develop each child's ability to work with his classmates and teachers in a constructive and cooperative manner.
4. To develop each child's conceptual background and appreciation of the visual and performing arts.
5. To develop each child's ability to effectively communicate his thoughts, ideas, and feelings through discussion, dramatization, and artistic expression.
6. To develop each child's ability to understand the spoken, dramatic, and graphic expressions of others.
7. To develop each child's ability to apply his powers of reasoning in a variety of situations.
8. To develop each child's initiative, creativity, curiosity, and acceptance of the viewpoints of others.

Weikart (1986) describes the role of the teacher and of the child in the Cognitively Oriented Curriculum Model. According to Weikart (1986), teachers should seek to understand how children view their world and how each child's conception of the world changes in the course of his development. Weikart (1986) asserts that teachers should capitalize upon, but not

direct or control, the thoughts and actions of the children. He contends that, with teacher guidance, children should have daily opportunities to plan what they want to accomplish and to identify the sequence of steps they must follow and the materials they will need to carry out their plan. The teacher should use the child's daily plan as the starting point for teaching him to make observations, note relationships, and define and solve problems (Weikart, 1986).

The Cognitively Oriented Curriculum is organized around four basic content areas which provide the structure or framework for learning: classification, seriation, number concepts, and spatial relationships (Weikart, et al., 1971). Skills in classification, or grouping, consist of encouraging the child to "... make relational or functional discriminations" (Weikart, et al., 1971, p. 7). Skills in seriation, or ordering, are developed by "... having the child deal with objects in terms of their relationships in size, quantity, or quality" (Weikart, et al., 1971, p. 7). The child's perceptions of spatial relationships is "... approached through expressions of the orientation of the child's body and the orientation of other objects in space" (Weikart, et al., 1971, p. 7). Finally, the child's understanding of temporal relations involves his ability to appreciate that a period of time has a beginning and an end, to comprehend sequence of events of a story, and to realize that time periods can vary in length (Weikart, et al., 1971).

The daily routine of a Cognitively Oriented Curriculum

is organized around the "plan-do-review" sequence. During planning time, children have the opportunity to select the activities in which they will participate and discuss their plans with a member of the teaching staff (Weikart, 1986). With the assistance of the teacher, the children make decisions about the steps to be followed in accomplishing their goals (Weikart, 1986). During work time, the children are responsible for carrying out the plans they have formulated. According to Weikart (1986), the teacher uses this time to observe how effectively the children are learning, interacting with their classmates, and finding solutions to problems. In addition, at this time, teachers provide assistance and encouragement when necessary. Recall time, which is the last phase of the "plan-do-review" sequence, affords children "... the opportunity to represent their work-time experiences in a variety of developmentally appropriate ways" (Weikart, 1986, p. 89). For example, during this time, children can relate the problems they faced in executing their plans or make a graphic representation of what they accomplished (Weikart, 1986).

During the last two decades, numerous longitudinal studies were initiated to evaluate early childhood development programs for disadvantaged youngsters. The objectives of these extensive research projects were to examine the long-term effects of different types of preschool programs and to ascertain whether one curriculum model was most likely to produce beneficial results for children from low-income families. One of the most

comprehensive of these longitudinal studies was the High/Scope Preschool Curriculum Study which was developed by David Weikart and carried out in the public schools of Ypsilanti, Michigan between 1967 and 1970 (Schweinhart, Weikart, & Larner, 1986). The High/Scope Preschool Curriculum Study examined the long-term effects of three high quality preschool curriculum models: the DISTAR Direct Instruction Curriculum Model, the High/Scope Cognitively Oriented Open-Framework Curriculum Model, and the Child-Centered Curriculum Model of the traditional nursery school (Schweinhart, et al., 1986). The students who took part in these preschool programs at three and four years of age were evaluated through age fifteen with respect to intellectual and academic performance as well as for social and emotional adjustment (Schweinhart, et al., 1986). The preschoolers who qualified for participation in this study came from low-income families and, based on pretest IQ scores, were considered at risk of school failure (Schweinhart, et al., 1986). To achieve control of significant variables, the subjects of the study were paired for gender, pretest IQ score, age at program entry, and socioeconomic level and were randomly assigned to one of the three preschool curriculum models (Schweinhart, et al., 1986).

Weikart and Schweinhart (1986) report the following long-term effects with respect to intellectual performance, school achievement, juvenile delinquency, and other social variables. These researchers state that, when the average IQ scores of the three curriculum groups were compared in later years, each

of the groups showed a marked improvement, and that there were no significant differences between the groups. An analysis of IQ test scores administered at the end of the first year of the preschool program revealed that average IQ scores for each of the curriculum models increased between twenty-three and twenty-nine points, and that, after one year in a high quality preschool program, all the children had moved out of the high risk category (Weikart & Schweinhart, 1986). To assess the effects of the different curriculum models on school achievement at the end of first and second grades, the California Achievement Test was administered. Weikart and Schweinhart (1986) report that the scores of each of the groups revealed increases of between fifty and sixty points between the two administrations of the test, but that there were no statistically significant differences between the three groups at either time. However, according to Weikart and Schweinhart (1986), when the Adult Performance Level Survey was administered to the group at age fifteen to assess "... competence in solving real-world problems and coping with the cognitive demands of adult life" (p. 63), those students who had participated in the Direct Instruction Curriculum Model achieved the lowest scores in nine out of eleven categories.

The effects of the different curriculum models on juvenile delinquency were assessed by means of self-reports by the students at age fifteen. According to Weikart and Schweinhart (1986), the average participant in the direct instruction group

reported that he had taken part in thirteen delinquent acts. On the other hand, the average member of the child-centered group said that he had participated in seven acts of juvenile delinquency, and the average member of the cognitively oriented open-framework group reported only five such acts of juvenile delinquency (Weikart & Schweinhart, 1986). Moreover, Weikart and Schweinhart (1986) found that:

> The Distar group engaged in twice as many acts of personal violence as the other two groups, and five times as many acts of property violence. The Distar group members reported that they had engaged in twice as many acts of drug abuse as the other two groups, and twice as many activities that were labeled "status offenses" - fights with parents, trespassing, and running away from home. (p. 63)

Weikart and Schweinhart (1986) discuss the effects of the different curriculum models on other social variables, such as family relationships, activities, school behavior and attitudes, and mental health. With respect to family relations, they explain that one out of three participants in the direct instruction group considered that their families believed that they were doing poorly in school, but that only one out of thirty-six members of the other two groups expressed this sentiment. Moreover, according to Weikart & Schweinhart (1986), one out of five students in the direct instruction group reported that they did not get along well with their families, while no one in the cognitively oriented open-framework program gave this response. These authors also point out that one out of three participants in the cognitively oriented open-framework

program said that they helped out with household expenses, but that fewer than one out of six members of the direct instruction group made such contributions at home. In the area of extra-curricular activities, Weikart and Schweinhart (1986) found that the most significant group difference related to participation in athletic endeavors. Indeed, these researchers report that almost all of the participants in the cognitively oriented open-framework curriculum took part in sports, while fewer than half of the direct instruction group pursued an athletic activity. In addition, according to Weikart and Schweinhart (1986), not one member of the direct instruction group had ever been selected for an office or special job at school by fifteen years of age. Moreover, only half of the members of the direct instruction group had hopes of continuing their education after high school, while two-thirds of the child-centered group and three-fourths of the open-framework group had such aspirations (Weikart & Schweinhart, 1986). In the area of mental health, Weikart and Schweinhart (1986) found that the three curriculum groups reported a comparable number of personal problems. However, these researchers point out that the members of the direct instruction group were least likely to try to find help for their problems.

Weikart and Schweinhart (1986) summarize the results of the High/Scope Preschool Curriculum Study:

> The general picture of group differences that emerges at age 15 is that, when compared to both the High/Scope and nursery school groups, more of the Distar group members

> reported that they were not socially well-adjusted. The Distar group reported twice as many delinquent acts as did the other two curriculum groups, and more of its members reported poor relations with their families. The lesser degree of sports participation reported by the Distar group, and its lack of school appointments, both suggest that its members were less likely than the members of the other two curriculum groups to seek or to receive social acceptance from either peers or teachers. (p. 64)

The following tables illustrate the major findings of the High/Scope Preschool Curriculum Study:

Table 6. Delinquent Acts Reported at Age 15 by Curriculum Groups

Variable[a]	Distar	High/Scope	Nursery School	*p*
Delinquency scale, 18 items, *alpha* = .83	**12.83** (12.33)	**5.44** (5.15)[a]	**6.94** (8.01)	.04
Personal violence subscale	**2.28** (3.30)	**0.88** (1.11)	**1.17** (1.92)	—
Hit an instructor/supervisor	.39	.06	.00	—
Had a serious fight in school or at work	.72	.28	.56	—
Been in a group fight	.44	.22	.11	—
Seriously injured someone	.50	.28	.50	—
Used a weapon to get something[b]	.22	.00	.00	—
Property damage subscale	**1.72** (2.89)	**.28** (0.57)	**.39** (1.14)	.04
Committed arson	.44	.00	.00	.06
Purposely damaged school property	.83	.29	.39	—
Purposely damaged work property	.22	.00	.06	—
Stealing subscale	**3.06** (4.18)	**1.72** (2.44)	**2.22** (3.04)	—
Stolen something worth under $50	1.17	.72	.89	—
Stolen something worth over $50	.44	.11	.17	—
Stolen something from a store	1.00	.83	1.00	—
Stolen a car	.00	.06	.06	—
Stolen part of a car	.28	.00	.11	—
Used a weapon to get something[b]	.22	.00	.00	—
Drug abuse subscale	**3.17** (3.22)	**1.06** (1.43)	**1.89** (2.85)	.06
Smoked marijuana	2.06	.78	1.39	—
Used other illegal drugs	1.11	.28	.50	—
Status offenses subscale	**3.04** (2.71)	**1.56** (2.04)	**1.22** (1.73)	.04
Argued or fought with parents	1.94	1.11	1.00	—
Run away from home	.38	.17	0.00	.02
Trespassed	.72	.28	.22	—

Note. $N = 54$, 18 per group. Group differences on these variables were tested by analysis of variance; *p*-values are reported if less than .10. Standard deviations on summary scales are included in parentheses.

[a] Scales are sums of item scores; items are responses to the question, "Have you ever...?" scored: 0 to 2 = as indicated, 3 = 3 or 4 times, 4 = 5 or more times.

[b] Weapon use included on both personal violence and stealing subscales.

(Schweinhart, et al., 1986, p. 35)

Table 7. Social Behavior and Attitudes Reported by Curriculum Groups at Age 15

Variable	Distar	High/Scope	Nursery School	*p*
Family relations				
How have you been getting along with your family?				
Great	33%	33%	28%	—
Fair	44%	67%	56%	
Poorly	22%	0%	17%	
How does your family feel about how you're doing?				
Great	0%	6%	6%	.03
All right	67%	94%	89%	
Poorly	33%	0%	6%	
Contribute to household expenses ($N = 42$)	14%	33%	23%	—
Activities				
Participate in sports				
Often	17%	50%	44%	.02
Sometimes	28%	44%	28%	
Never	56%	6%	28%	
In recent weeks, have read				
A book ($N = 49$)	31%	69%	59%	.09
A newspaper	67%	89%	72%	—
A magazine ($N = 53$)	44%	41%	72%	—
Ever done volunteer work	22%	28%	28%	—
School behavior and attitudes				
Appointed to an office or job in school ($N = 53$)	0%	12%	33%	.02
Personal education plans ($N = 36$)				
Postsecondary	50%	77%	64%	—
High school	42%	23%	36%	
Drop out	8%	0%	0%	
Schooling total scale, 19 items, *alpha* = .79	44.3 (9.3)	49.3 (11.1)	45.9 (9.2)	—
Learning process subscale, 9 items, *alpha* = .66	21.3 (5.4)	21.5 (5.4)	20.8 (5.8)	—
Teachers subscale, 10 items, *alpha* = .78	23.1 (6.3)	27.8 (6.7)	25.2 (7.6)	—
Mental health				
Perceived number of personal problems ($N = 52$)				
More than others	17%	11%	11%	—
Same as others	33%	33%	50%	
Less than others	50%	56%	39%	
Help sought for a personal problem more than once	11%	41%	22%	—
Self-esteem—Rosenberg scale, 10 items scored 10-40, *alpha* = .70	26.5 (3.2)	28.1 (3.8)	27.7 (3.3)	—
Perceived locus of control—Bialer scale, 23 items, *alpha* = .34	14.6 (2.9)	13.6 (2.7)	13.9 (2.4)	—
Area in which you want to do well				
School	44%	39%	50%	—
Sports	17%	39%	17%	
Family	11%	17%	6%	
Friends	6%	0%	28%	
Other	22%	6%	0%	
Perceived competence in that area				
Better than others	24%	33%	29%	—
The same as others	47%	61%	53%	
Worse than others	29%	6%	18%	

Note. $N = 54$, 18 per group, unless otherwise noted. When means are presented, standard deviations are included in parentheses. The probability level of a group difference is reported if it is less than .10; percentages were compared by the chi-square statistic, means by analysis of variance.

(Schweinhart, et al., 1986, pp. 37 - 38)

In a discussion of the implications of the High/Scope Preschool Curriculum Study, Schweinhart, et al., (1986) report the unexpected finding that, in terms of intellectual and scholastic performance, the three diverse preschool curriculum models achieved essentially the same results. Indeed, these researchers determined that "... all the curricula were successful in reducing school failure" (p. 41). The evaluation of the High/Scope Preschool Curriculum Study at age fifteen revealed two additional significant findings. First of all, according to Schweinhart, et al. (1986), the study replicated the findings of the Perry Preschool Project and confirmed that high quality preschool programs for economically disadvantaged youngsters have positive effects on both their short-term and long-term intellectual and scholastic performance. In addition, the study revealed that, although there were no apparent differences in terms of academic achievement, there were pronounced differences in terms of social and emotional adjustment (Schweinhart, et al., 1986). In interpreting these results, Schweinhart, et al., (1986) caution that the findings of the High/Scope Curriculum Study do not indicate that the members of the direct instruction group were more maladjusted than they would have been if they had not taken part in that preschool program. Thus, these researchers believe that participation in the direct instruction preschool program did not actually impede the children's social development. Indeed, they believe that the direct instruction model probably had

neither positive nor negative effects on the children's social development because of the program's uniquely academic focus. However, these researchers contend that, since the other two curriculum models did have social and emotional objectives as well as academic objectives, these programs were more likely to have positive long-term social and emotional effects, in additional to favorable academic results.

The results of the High/Scope Preschool Curriculum Study have important implications for educators who seek to design effective preschool programs for economically disadvantaged youngsters. First of all, according to Schweinhart, et al., (1986), early childhood educators should think carefully before planning a strongly academic curriculum model for three- and four-year-olds. These researchers point out that, although high quality preschool programs are beneficial in helping disadvantaged youngsters overcome the detrimental effects of poverty, "... formal academic programs as represented by direct instruction learning models may be inadequate to the task, because they fail to have the desired social-behavior consequences" (p. 43). In addition, Schweinhart, et al., (1986) advise that current direct instruction preschool programs should be carefully studied and evaluated in light of the fact that this curriculum model, with its heavy emphasis on academic competence, appears to be ineffective in minimizing the youngsters' social and emotional problems in later life. Thus, the most recent results of the High/Scope Preschool Curriculum

Study indicate that "there are important social consequences to preschool curriculum choices" (Schweinhart, et al., 1986, p. 41).

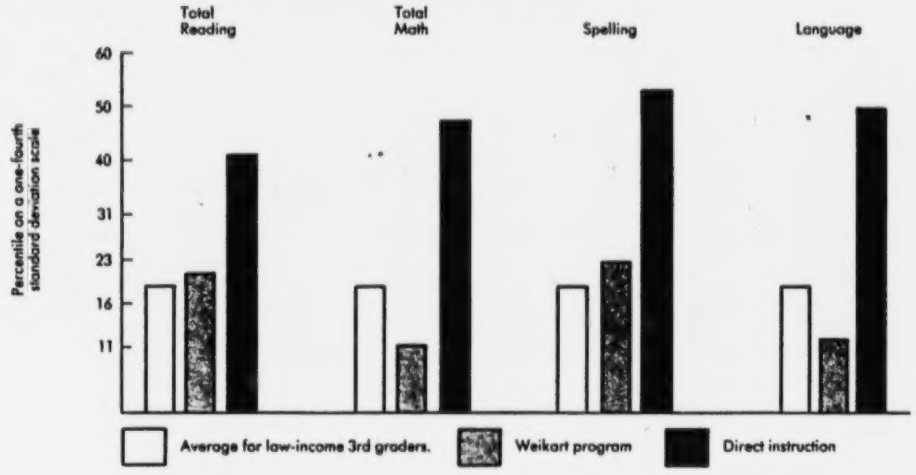
In a critique of the High/Scope Study, Carnine, Carnine, Karp, and Weisberg (1988) question some aspects of the experimental design, and, so, they are skeptical about the findings of the project. These researchers argue that the subject sample of the High Scope Study was very small, that the study was administered by David Weikart (the chief advocate of the Cognitively Oriented Open-Framework Curriculum), and that the programs were put into effect by teachers who were hired by Weikart. Moreover, Carnine, et al., (1988) assert that the High/Scope Study was conducted in an artificial laboratory school setting and that the major conclusions were based upon subjective self-reported information from the students.

Longitudinal studies conducted by independent researchers and direct instruction researchers reveal results which refute many of the conclusions of the High/Scope Study. For example, one extensive research project which was designed to ascertain whether one curriculum model was most suitable for the special needs of children from low-income families was Project Follow Through. Project Follow Through, which began in 1968 and was completed in 1976, is considered one of the most comprehensive educational experiments ever conducted (Becker & Engelmann, 1977). In Project Follow Through, nine major curriculum models,

including High/Scope's Cognitively Oriented Curriculum Model and the University of Oregon's Direct Instruction Curriculum Model, were implemented in 139 communities and were evaluated over time (Becker and Engelmann (1977). According to Becker and Engelmann (1977), the national evaluation of Project Follow Through determined that the Direct Instruction Curriculum Model had a favorable effect on the scholastic achievement of economically disadvantaged children who took part in the program from kindergarten through the third grade. Indeed, Becker and Engelmann (1977) state that, in all areas assessed (Basic Skills, Cognitive-Conceptual Skills, Math Problem Solving, and Affective Measures of Self-Esteem), the Direct Instruction Curriculum Model produced more statistically significant benefits than any of the other curriculum models. For example, these researchers report that, on the Metropolitan Achievement Test administered to students at the end of third grade, youngsters who began Direct Instruction Preschool programs in kindergarten achieved the following percentile ranks: Total Reading 41, Total Math 48, Total Spelling 51, and Language 50. Becker and Engelmann (1977) point out that, even though all children who took part in Project Follow Through were at risk of school failure at the inception of the study, those youngsters who participated in the Direct Instruction program achieved scores at or near national norms in all areas by the end of third grade. The following graph illustrates the comparative percentile scores in reading, math, spelling, and language for third graders who

took part in the Cognitively Oriented Curriculum Model and the Direct Instruction Curriculum Model:

Figure 5.3
Percentile scores for 3rd graders on four batteries of the Metropolitan Achievement Test for direct instruction, Weikart, and a national sample of low-income students



(Carnine, et al., 1988, p. 81)

Gersten, Carnine, and Keating (1984) conducted a study to evaluate the long-term effects of the Direct Instruction Curriculum Model on the high school careers of students from disadvantaged backgrounds. These students had participated in Direct Instruction Project Follow Through from either kindergarten through third grade or first through third grade (Gersten, et al., 1984). The students were assessed for academic achievement and student status data, such as graduation/drop out information, in-grade retention, college application and/or acceptance, and high school attendance (Gersten, et al., 1984).

Academic achievement was measured by scores on standardized achievement tests, and student status data was derived from high school records. According to Gersten, et al., (1984), participation in Direct Instruction Project Follow Through had a generally favorable effect on academic achievement. Moreover, these researchers assert that students who had been part of a direct instruction program during the early childhood years were more likely to graduate from high school, more likely to apply to college, and less likely to be held over in any grade. Gersten et al., (1984) conclude that attendance in a high quality, academically focused direct instruction program in the early grades had a lasting and positive effect on the lives of the students. Moreover, these researchers determined that youngsters who entered the direct instruction program in kindergarten seemed to experience greater benefits than those who started in the first grade.

Similar long-range academic effects of Direct Instruction Project Follow Through are reported by Meyer (1984). Meyer (1984) discusses a longitudinal research project involving disadvantaged students who took part in a direct instruction program from kindergarten through the third grade in a New York City public school in Ocean Hill-Brownsville. This researcher sought to ascertain whether participation in an academically oriented direct instruction program during the early childhood years had an enduring, positive effect on students at the high school level. The youngsters who took part in the study were

assigned to either an experimental group that attended a direct instruction academic intervention program in kindergarten or to a control group that took part in a traditional program which started academic instruction in first grade (Meyer, 1984). Meyer (1984) found that the students who attended the direct instruction program were more likely to graduate from high school, less likely to drop out of high school, and more likely to apply to and be accepted by a college. Moreover, Meyer (1984) ascertained that results of achievement tests in reading and mathematics administered in the ninth grade generally favored the direction instruction group.

Meyer (1984) discusses several implications to be derived from this study. First of all, based on the results of the study, she challenges critics who charge that a direct instruction approach to learning produces students who are effective decoders but who do not understand what they read. Meyers (1984) affirms that students in the direct instruction group demonstrated that they do indeed comprehend well. Secondly, Meyer (1984) points out that the findings of this longitudinal study indicate that early academic intervention programs which focus on reading, language, and mathematics increase the likelihood that economically disadvantaged students will experience long-term academic success. Finally, Meyer (1984) asserts:

Studies such as this that strongly suggest that early interventions can have lasting effects should be considered seriously by policymakers with smaller budgets and larger numbers of poor students. These results point to increased benefits for poor children who receive help in basic skills when they enter school. Early intervention may be the most cost-effective educational program on a long-term basis. (p. 392)

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Bereiter and Engelmann present the concept of the Direct Instruction Curriculum Model as it applies to preschool education. This curriculum model emphasizes a systematic and structured method for developing and maintaining academic skills. These authors assert that, in order to overcome skill deficits which are a consequence of poverty, disadvantaged youngsters must learn those skills which are vital for success in school at a faster, more intense pace than is customary at the preschool level. They believe that the curriculum content of a traditional nursery school, with its emphasis on social and emotional skills, is not compatible with the objective of rapidly teaching the cognitive skills which the economically disadvantaged child must acquire. Thus, Bereiter and Engelmann urge that educators who plan a compensatory preschool program for disadvantaged youngsters be selective in their choice of curriculum content. They advise direct instruction in those academic skills which the child seriously lacks and which are prerequisites for success in school. The authors present basic teaching strategies and specific suggestions for the curriculum content, methodology, and materials of the language, music, arithmetic, and reading components of a direct instruction curriculum model for preschool children.

Consortium for Longitudinal Studies (1983). As the twig is bent ... lasting effects of preschool programs. Hillsdale, NJ: Erlbaum.

The Consortium for Longitudinal Studies was organized in 1975 to evaluate a variety of preschool programs which were developed in the 1960's. The researchers who collaborated to produce this volume sought to ascertain whether high quality early childhood development programs have significant long-term effects on the performance of economically disadvantaged youngsters. In evaluating the results of longitudinal studies, these researchers considered various areas of human development. They studied the influence which a preschool education has on the development of language, cognitive, social, and emotional skills which are prerequisites for a positive academic experience in later years. On the basis of the results of numerous longitudinal studies, these researchers concluded that high quality compensatory preschool programs are indeed beneficial in offsetting the negative effects of poverty. Among the preschool programs which were the subject of the longitudinal studies reported in this book are the Perry Preschool Project, Project Head Start, and Project Follow Through.

Stanley, J. C. (1972). Preschool programs for the disadvantaged. Baltimore, MD: The Johns Hopkins University Press.

This book contains a collection of articles by specialists in the field of early childhood education. These articles describe and evaluate five experimental approaches to early childhood education for disadvantaged youngsters. The educational approaches which are discussed include the academic preschool which is based on the Direct Instruction Curriculum of Bereiter and Engelmann and the Open-Framework Curriculum Model which is exemplified by Weikart's Cognitively Oriented Curriculum. Other chapters include: An Integrated Approach to Early Childhood Education, Spontaneous Language and the Preschool Environment, The Treatment of Personality Variables in a Preschool Cognitive Program, and The Status and Future of Preschool Compensatory Education.

Weikart, D. P., Rogers, L., Adcock, C., & McClelland, D. (1971). The cognitively oriented curriculum. Ypsilanti, MI: High/Scope Press.

The Open-Framework Curriculum Model, in which the teacher and child both plan and initiate activities is discribed in The Cognitively Oriented Curriculum. The authors state that this educational approach emphasizes both the intellectual and social development of the child. It is based upon the premise that children learn most effectively when they play an active role in the learning process and when they plan for and carry out their own educational experiences. The authors emphasize that the Cognitively Oriented Curriculum is organized around four basic content areas: seriation, classification, number concepts, and spatial relationships and that these content areas provide the structure or framework for learning. The authors also present a detailed account of other major components of a cognitively oriented, open-framework preschool curriculum model, including the physical layout of the classroom, the materials and equipment for the classroom, and the "plan-do-review" cycle of the school day. In addition, they discuss the procedures for conducting home visits and parent meetings.

CURRENT STATE OF THE ART

The Child-Centered Curriculum Model, the Direct Instruction Curriculum Model, and the Open-Framework Curriculum Model illustrate the diversity in curriculum emphasis, instructional methodology, and conception of learning that currently exists in the field of early childhood compensatory education. The Child-Centered Curriculum Model continues to represent the philosophy of the traditional nursery school program and to exemplify the methodology which has historically been considered good nursery school practice. Thus, the major features of this curriculum model have remained essentially unchanged during the last three decades. Therefore, the discussion which follows will focus on the Direct Instruction Curriculum Model and the Open-Framework Curriculum Model. This discussion will involve a comparison of the two instructional approaches and an evaluation of the advantages and disadvantages of each in terms of the specific needs of the economically disadvantaged child. Arguments which are currently being expressed by the advocates and opponents of each of the curriculum models will be presented.

The Direct Instruction Curriculum Model emphasizes the development of children's academic competence. The rationale for Direct Instruction in compensatory preschool education is frequently reported in current educational research. Advocates of Direct Instruction contend that economically disadvantaged youngsters require intensive academic intervention during the

preschool years in order to achieve a level of academic skill development which is commensurate with that of their more advantaged peers and which is essential for a favorable academic experience in the primary grades.

In the Direct Instruction Curriculum Model, academic skills and strategies are taught to children in a systematic, sequential, and highly-structured manner (Gersten, Carnine, & Woodward, 1987). The curriculum materials and teaching strategies are carefully designed to be clear and definitive (Gersten, et al., 1987). The highly-structured, teacher-directed lessons proceed at a fast pace and provide numerous occasions for students to interact with the teacher, answer questions, and receive positive reinforcement of correct responses and immediate correction of incorrect responses (Dale & Cole, 1988). Lessons are prescripted with both the exact words to be spoken by the teacher and with the child's likely responses (Mathes & Proctor, 1988). The teacher presents these lessons to small groups of from five to ten students and uses a system of signals for prompting the children to respond in unison to her questions (Mathes & Proctor, 1988). Children's choral responses to teacher questioning result in a high frequency of pupil participation and numerous opportunities for each child to practice the target skill during every instructional period (Mathes & Proctor, 1988).

According to Gersten, Woodward, and Darch (1986), there are six basic features which are critical to the success of

the Direct Instruction Curriculum Model. These features include a carefully-designed, step-by-step strategy for instruction in academic skills; the development of mastery at each phase of instruction; a strategy which ensures immediate correction of student errors; a gradual progression from teacher-directed activities toward independent projects; ample opportunity for systematic practice and application of newly-learned skills; and on-going review of previously-learned concepts.

Gersten and Keating (1987) point out that the highly-structured, step-by-step approach and the small-group instructional format of Direct Instruction lessons allows teachers to easily evaluate the children's understanding of the concept or skill under consideration and to diagnose any problems that they are having. These educators add that, when children demonstrate a lack of understanding, the teacher can assist them in mastering the problematic skill by providing immediate corrective feedback and by modeling the appropriate response or strategy. Gersten, et al. (1986) describe this aspect of Direct Instruction by explaining that "... if the student makes an error, or fails to respond at all, the teacher can immediately intervene with a model of how to answer correctly or some type of instructional prompt based on a previously taught rule" (p. 20).

According to Gersten, et al. (1986), economically disadvantaged youngsters consistently demonstrate higher academic achievement when they receive instruction which includes teacher

modeling and demonstration followed by guided practice and feedback. Direct Instruction lessons typically follow this routine. During the modeling phase, teachers provide "... a clear, controlled presentation of new material" (Gersten, et al., 1986, p. 18). Next, during guided practice, the teacher poses questions, checks for understanding, and provides feedback in the form of positive reinforcement of desired responses and immediate correction of errors (Gersten, et al., 1986). At this point, if the children's responses reveal that they have not fully understood the new concept, the teacher provides additional demonstration and modeling (Gersten, et al., 1986). Finally, the children engage in independent activities which are designed to provide practice of the newly-learned skill or concept while the teacher provides individual instruction for children who need extra help in mastering the skill (Gersten, et al., 1986). Research studies have been conducted to determine which Direct Instruction teaching strategies have the greatest impact on children's academic achievement. According to Gersten, et al. (1987), research indicates that "... immediate correction of student errors and maintaining high student success rates" (p. 50) appear to be most crucial for effective learning.

With respect to curriculum content and lesson design, Direct Instruction programs for economically disadvantaged preschool and kindergarten youngsters have two basic objectives. According to Gersten, Darch, and Gleason (1988), these objectives are

to encourage the acquisition of knowledge and the development of academic skills which are essential for success in first grade and "... to help children gradually increase their attention span and their ability to focus on academic material in small-group instruction" (p. 236). Gersten, et al. (1988) explain that the curriculum content of a Direct Instruction program for economically disadvantaged preschool children is closely related to the curriculum content of first grade. Thus, these authors advocate "... clear and direct alignment between the skills" (p.236) taught in nursery school and kindergarten and those which are part of the first grade course of study. For example, the sounding and blending strategies introduced in a Direct Instruction nursery school or kindergarten provide the foundation for the more advanced word-attack strategies which are developed in first grade (Gersten, et al., 1988). Similarly, readiness skills in mathematics which are prerequisites for the more sophisticated mathematical concepts to be presented in first grade are also systematically taught at the preschool level (Gersten, et al., 1988). In addition, according to Gersten, et al. (1988), in Direct Instruction programs for economically disadvantaged preschoolers, new material is introduced at a slower pace than is customary in readiness programs for middle-class youngsters in order to assure adequate mastery of essential concepts and to avoid frustration. These authors also explain that, in order to encourage successful learning experiences, numerous examples and extensive practice,

review, and application of each new concept are provided during Direct Instruction lessons.

The curriculum of a Direct Instruction program for economically disadvantaged preschoolers involves two major areas of instruction, language arts and mathematics. The language arts program includes an oral language component and a reading instruction phase. According to Carnine, Carnine, Karp, and Weisberg (1988), more than half of the instructional time involves development of and practice in oral language skills. The objectives of the oral language program are to enhance the children's understanding of basic concepts and to develop their ability to describe significant aspects of their environment (Gersten, et al., 1988).

The oral language component of a Direct Instruction preschool program for economically disadvantaged children is designed to encourage understanding of the teacher's instructions and explanations. Therefore, many language lessons are devoted to providing experiences and practice with instructional vocabulary and concepts, such as same, different, first, last, above, below, in front of, and behind, which are frequently used during the course of the school day (Carnine, et al., 1988). In addition, comparatives, superlatives, and inferences are systematically presented and practiced (Carnine, et al., 1988). Moreover, the scope of the oral language curriculum includes basic temporal and spatial concepts, part-whole relationships, and classification strategies (Carnine, et al., 1988). The

listening comprehension phase of the oral language program builds a solid foundation for the skills in reading comprehension which will be developed in first grade (Gersten, et al., 1988).

The Distar Language 1 instructional program of Engelmann and Osborn (1987) exemplifies the Direct Instruction Curriculum Model as it is currently being practiced and implemented in nursery schools and kindergartens. Distar Language 1 was developed for those preschool-age children who, as a result of an impoverished home environment, have not developed basic language skills and concepts which are prerequisites for success in school (Engelmann & Osborn, 1987). This program is also designed to be used with young children for whom English is a second language (Engelmann & Osborn, 1987). The curriculum includes six major areas of instruction: Description of Objects, Actions, Instruction Words, Classification, Information, and Application of Skills (Engelmann & Osborn, 1987). According to the publishers of Distar Language 1, the curriculum materials of this program are designed to foster extensive verbal interaction between teacher and student. In a typical language development lesson, the teacher presents a brief introductory explanation, models and demonstrates the skill, and then poses a series of questions to evaluate student understanding. Lesson plans provide the precise wording of teacher explanations and questions as well as the children's likely responses. Detailed procedures for the immediate correction of incorrect responses are also included. In addition, there are instructions

concerning the system of signals to be used for prompting the choral responses of the children. The lessons also include activities for guided practice and independent practice. Erickson (1987) discusses the advantages of Distar Language 1. This educator reports that, because of the inherent structure of the program, children always know what is expected of them. Moreover, according to Erickson (1987), as students "... learn a new skill in one task, they apply it to another, and review it in another" (p. 28). Therefore, they experience frequent academic success. Finally, Erickson (1987) has determined that the skills and abilities which preschool children develop in Distar Language 1 typically are reflected in favorable academic performance in first grade.

In addition to oral language instruction, pre-reading instruction is a vital component of the language arts program in a Direct Instruction nursery school or kindergarten. The initial stages of reading instruction involve the development of an understanding of letter-sound relationships, left-to-right progression in reading, rhyming, and word identification (Carnine, et al., 1988). As soon as the children have mastered several letter-sound and blending strategies, they are asked to apply their knowledge by reading meaningful words in the context of phrases, short sentences, and simple stories (Carnine, et al., 1988). According to Carnine, et al. (1988), the stories include vocabulary words that are "... controlled for regularity to provide an opportunity to practice the sounds" (p. 77).

In addition, Carnine, et al. (1988) explain that "... the number of irregular words in the stories is kept to a minimum to reduce confusion about sound-symbol relationships" (p. 77).

In the Direct Instruction approach, phonics is taught by means of a synthetic method as opposed to the analytic method of the traditional kindergarten (Gersten, et al., 1988). Skills are broken down into subskills and are taught in small steps, and a great deal of practice is provided before a new aspect of the skill is presented (Gersten, et al., 1988). In addition, the sequence in which letter-sound relationships are introduced is specifically designed to comply with principles of curriculum design which have been derived from research (Gersten, et al., 1988). For example, sounds and symbols which children often find confusing, such as b and d, are separated by several lessons (Carnine, et al., 1988). Moreover, according to Gersten, et al. (1988), in a Direct Instruction reading readiness program, children are introduced to new sounds at a much slower rate than is traditional in most other readiness programs. A new letter is presented on one day and then several days are set aside for practice in order to achieve a designated level of mastery (Carnine, et al., 1988). Proponents of the Direct Instruction approach contend that a faster rate of instruction would be confusing and frustrating for young children.

In addition to language arts, mathematics plays an important role in the academically-oriented Direct Instruction Curriculum Model for economically disadvantaged preschoolers. A major

objective of the mathematics component is to encourage children to practice several types of number skills each day (Carnine, et al., 1988). During initial phases of instruction, children may count objects, identify and write numbers, and engage in rote counting during any one day (Carnine, et al., 1988). Later on, children may be asked to listen to and solve simple number stories and draw conclusions from a series of facts which are presented to them (Carnine, et al., 1988). New material is introduced at a slow pace and ample opportunity is provided for practice, review, and application of skills so that children achieve mastery at each stage of instruction (Carnine, et al., 1988).

Gersten, et al. (1988) summarize the guiding principles of curriculum design in Direct Instruction. These authors state that children should enjoy "... high levels of success" (p. 230) each day, that there should be a great deal of teacher-pupil interaction, and that the pace and the length of the lessons should be adapted to suit the short attention span of preschool children.

Ongoing assessment is an essential component in the design and implementation of a Direct Instruction preschool program. The purpose of assessment is to identify children who are having difficulty mastering specific skills and concepts or who are progressing at an unusually slow rate. Criterion-referenced tests, which are designed to evaluate student performance, are administered after each phase of instruction (Carnine, et al.,

1988). The items on these tests are "... designed to correspond to specific instructional tasks so that remedial implications are clear" (Carnine, et al., 1988). Thus, by studying a child's performance on criterion-referenced tests, the teacher can determine which areas of instruction require further review and reinforcement. Moreover, data derived from these tests can indicate changes in group placement which should be made (Gersten, et al., 1987). The results of criterion-referenced tests can also be used to evaluate the effectiveness of an instructional strategy and to determine whether a plan of instruction should be changed or modified (Gersten, et al., 1987).

The Direct Instruction Curriculum Model has received criticism from advocates of the Open-Framework Curriculum Model. Schweinhart and Weikart (1988) contend that many of the activities in a Direct Instruction program for preschool children are not "... developmentally appropriate" (p. 218). For example, Schweinhart and Weikart (1988) explain that, although there is ample opportunity for interaction between children and teachers in Direct Instruction, there are few occasions for social interaction between the children themselves. Thus, Schweinhart and Weikart (1988) charge that a Direct Instruction preschool program fails "... to take full advantage of the opportunities that are available to influence positively the development of young children's problem-solving skills" (p. 222). In addition, Schweinhart and Weikart (1988) have

determined that a Direct Instruction preschool program fosters dependence on adults and does not promote cooperation between children. Moreover, these authors have found that the Direct Instruction Curriculum Model actually discourages children from developing autonomy because of the authoritarian role of the teacher and the rigid system of rewards and punishment that she is required to employ. According to Schweinhart and Weikart (1988), during the preschool years, the focus of an early intervention program should be on developing life skills, such as independent thinking, taking part in discussions, experimenting, and taking the initiative for learning and problem-solving. Therefore, Schweinhart and Weikart (1988) judge that, although the Direct Instruction approach may be justifiable for educating older children and adults, its validity for educating young economically disadvantaged children is questionable. These researchers advise that children derive important skills and attitudes not only from curriculum content but also from interacting with one another and from initiating their own learning activities. Schweinhart and Weikart (1988) conclude that:

> Young children living in poverty may have had little experience with the combination of expectations and nurturance that comes from teachers. Teacher-directed instruction emphasizes specific expectations and systematizes nurturance. A child-initiated learning program establishes broad expectations and is more generous with unconditional nurturance. It may therefore provide a better transition from family to schooling. (p. 223)

Advocates of teacher-directed instruction for economically disadvantaged preschoolers have vigorously responded to the critics of the Direct Instruction Curriculum Model. Although many early childhood educators have advised against academic intervention for low-income students in nursery school and kindergarten, proponents of Direct Instruction argue that delaying instruction in reading and mathematics only serves to increase the likelihood that these youngsters will experience learning difficulties in first grade. Carnine, et al. (1988) find that, because of the academic emphasis of the typical first grade curriculum, competence in social skills no longer suffices to gain teacher approval at that grade level. These researchers point out that decisions which relate to preschool academic intervention are less critical for children from advantaged backgrounds than for children from low socio-economic environments. According to Carnine, et al. (1988), "... without a well-orchestrated transition from a child-centered to a content-centered environment, children from low-income backgrounds will not be successful in first grade" (p. 75). Thus, it is vital that a preschool program for economically disadvantaged children develop a positive attitude toward learning and a sense of confidence with respect to academically oriented activities (Carnine, et al., 1988). In a Direct Instruction preschool program, the curriculum content, teaching strategies, and instructional materials are all meticulously designed to yield frequent success experiences for young

children. Therefore, Mathes and Proctor (1988) conclude that "... the Direct Instruction Model is a powerful approach for remedying the educational deficits of disadvantaged students" (p. 96).

The Open-Framework Curriculum Model differs from the Direct Instruction Curriculum Model with respect to curriculum emphasis, instructional methodology, and conception of learning. This instructional approach emphasizes both the intellectual and social development of the child. Its basic philosophy is that children learn most effectively when they play an active role in the learning process and when they plan for and carry out their own educational experiences. Advocates of this philosophy of education contend that such experiences contribute to the development of a child's sense of independence, responsibility, and initiative (Schweinhart & Weikart, p. 217).

The High/Scope Cognitively Oriented Preschool Curriculum exemplifies the Open-Framework Curriculum Model. In the High/Scope Preschool Program, the classroom is divided into several interest and activity areas which are designed to encourage children to interact with one another, observe and manipulate real objects, enact a variety of roles, and practice essential life skills (Schweinhart & Weikart, 1988). The daily routine is based upon a "plan-do-review" cycle which allows the children to plan for the activities in which they will participate each day. These child-initiated learning activities take place within the framework and structure of eight "key

experiences" - active learning, language, experiencing and representing, classification, seriation, number concepts, spatial relationships, and temporal relationships (Schweinhart, 1988).

According to Schweinhart and Weikart (1988), the instructional philosophy of the Open-Framework Curriculum Model has been inspired to a great extent by that aspect of the developmental theory of Jean Piaget which relates to the characteristics of the preschooler during the preoperational stage of development. Based on the ideas of Piaget, Schweinhart and Weikart (1988) conclude that the young child needs the opportunity to develop the "... foundations of physical, logical, and mathematical knowledge" (p. 218) through exploration, observation, testing, and experimentation at the preschool level. These educators have determined that the preschool child must learn to communicate and express his ideas with clarity, gain a sense of satisfaction from social interaction, and cooperate and share with others. Moreover, the preschool child needs to discover that his contributions to discussions and activities have importance and that his verbally-expressed ideas can influence the actions of others (Schweinhart & Weikart, 1988). Proponents of the Open-Framework Curriculum Model assert that direct instruction in basic academic skills is not appropriate for preschoolers during the preoperational stage of development (Schweinhart & Weikart, 1988). Therefore, according to Weikart (1988a), the High/Scope Preschool Curriculum is not "... a pre-academic orientation program designed to provide early

practice" (p. 30) in skills which are usually developed in first grade. Rather, the curriculum involves activities which are "developmentally appropriate" (Schweinhart & Weikart, 1988, p. 216) for the special needs of the preschool child. Thus, the High/Scope Curriculum is not "... a transplanted curriculum drawn from the early elementary school grade levels" (Weikart, 1988a, p. 30).

In the High/Scope Preschool Program, a consistent daily routine is maintained which involves a "plan-do-review" cycle followed by small group time and large group or circle time. Hohmann, Banet, and Weikart (1988) explain that the consistent and predictable nature of the daily routine of the High/Scope Preschool Program provides a sense of security for the children. By knowing what they are to do next, young children acquire a feeling of control that leads to the development of a sense of responsibility and independence (Weikart, 1988b). Therefore, Hohmann, et al. (1988) underscore the importance of familiarizing children with the daily routine from the very first day of school. These authors explain that the teachers acquaint the children with the daily classroom routine in several ways. First of all, they carry out all aspects of the routine in the same order each day and make a special point of frequently naming each time period as it is taking place. In addition, they establish and use a signal to mark the end of each time period and alert the children in advance of the signal that the period is drawing to a close. Moreover, at the end of each time period,

teachers talk with the children about the next phase of the daily routine. Finally, teachers take photographs during each time period and use them to make a chart which depicts the sequence of the different phases of the daily routine.

According to Schweinhart (1989), the "plan-do-review" cycle is designed to encourage children's skills in decision-making and problem-solving. Schweinhart (1989) indicates that:

> As children experience success in making plans, solving problems, and reviewing their work, they begin to realize that they are competent human beings, capable of making choices and decisions and following through on them. This increased sense of confidence is what we are striving for in our program. (p. 12)

The first phase of the "plan-do-review" cycle is planning time. During planning time, the child verbally expresses his ideas, choices, and decisions and, with teacher guidance, determines how he will execute the plans that he has made (Weikart, 1988b). According to Weikart (1988b), as he discusses his ideas with a teacher, the child forms a mental image of his plan and develops a reasonable method for putting it into action. Teachers use an open-ended questioning strategy to help children consider their choices and decide upon the sequence of steps and materials they will need to carry out their plans (Schweinhart & Weikart, 1988). This questioning strategy, in which there are no right or wrong answers, provides the opportunity for relaxed conversation between teacher and child and presents a model for verbal interaction between children (Weikart, 1988b). Moreover, as the teacher assists the child

in developing his plan of action, she learns a great deal about the child's developmental level and thought processes (Weikart, 1988b). As a result, the teacher is alerted to possible problems which the child may encounter as he carries out his plan and to methods which can be employed to help the child overcome these problems (Weikart, 1988b).

Once the children have formulated their plans, they engage in work time, the second phase of the "plan-do-review" cycle. Work time is the longest and busiest period in the daily routine (Schweinhart, 1988). Hohmann (1989) describes the activity centers which are a vital part of the work period. According to Hohmann (1989), sociodramatic play can occur in the block, drama, grocery store, house, and music and movement areas; language arts learning experiences can occur in the book and reading, writing and publishing, and computer centers; fine arts experiences can occur in the art, writing and publishing, drama, music and movement, and sewing areas; and math and science learning experiences can occur in the computer, block, cooking, grocery store, and plants and animals areas. The teachers observe the children in these activity centers to evaluate how they interact with their peers, gather information, and confront problematic situations (Schweinhart, 1988). However, teachers do "... enter into children's activities to encourage, extend, and set up problem-solving situations" (Schweinhart, 1988, p. 43).

Clean-up time follows work time. During clean-up time, children return materials and equipment to their designated

storage areas and place unfinished projects in a safe place for completion at a future time (Weikart, 1988b). Clean-up time activities allow children learn and practice cognitive skills, such as sorting and reading labels. It is important to note that the classroom is arranged so that children can locate, choose, and replace materials with a minimum of adult assistance (Weikart, 1988b). All classroom materials are on open shelves and are readily accessible to the children (Weikart, 1988b). Shelves are clearly labeled with a pictorial representation of the items they hold so that children can easily find and return materials and equipment by themselves (Weikart, 1988b).

Recall time is the last phase of the "plan-do-review" cycle. During recall time, children share and demonstrate their work time activities (Schweinhart, 1988). For example, according to Schweinhart (1988), children might draw a picture or make a model to illustrate a finished product, describe problems that developed as they executed their plan, or name other children who were involved in their activity. Schweinhart (1988) explains that recall time "... brings closure to children's planning and work time activities" (p. 44) and that the teacher's function during this period is to help children see the relationship between their finished product and their original plans.

After the "plan-do-review" sequence is completed, the children engage in small-group time. The activities for small-

group time are derived from the ethnic and cultural background of the children, from class excursions, from holidays and seasons of the year, and from group activities such as cooking and art projects (Weikart, 1988b). Although small-group time involves teacher-structured activities, children are encouraged to present original ideas and find individual solutions to problems (Weikart, 1988b). During small-group time, the teacher poses open-ended questions and presents problem-solving situations which are inspired by the original ideas which the children have expressed (Weikart, 1988b).

Large-group circle time follows small-group time and serves to complete the daily routine of the High/Scope Preschool Program. During circle time, the entire class joins with an adult for about fifteen minutes to play games, sing songs, do finger plays, participate in movement exercises, play musical instruments, or dramatize a special event (Schweinhart, 1988). Circle time activities encourage children to express their thoughts and ideas as well as to learn from and appreciate the thoughts and ideas of others (Schweinhart, 1988).

The High/Scope Open-Framework Curriculum is organized around eight basic content areas, or "key experiences," which provide the structure or framework for learning. According to Schweinhart (1988), the "key experiences" serve to guide the teacher in reinforcing and further developing the child's self-initiated ideas and choices "... so that developmentally appropriate experiences and opportunities for growth are

constantly available to the child" (p. 45). The "key experiences" selected for the High/Scope Curriculum are considered to be critical to the development of logical and rational thought processes in all children, regardless of their cultural, social, or economic background (Schweinhart, 1988).

The "key experiences" of the High/Scope Open-Framework Curriculum include: active learning, using language, representing experiences and ideas, classification, seriation, number concepts, spatial relations, and time (Schweinhart, 1988). To develop "active learning," teachers encourage children to explore and investigate with all of their senses, to discover relationships by firsthand experiences, to manipulate and alter materials in their environment, and to acquire skill with tools and equipment (Hohmann, et al., 1988). To develop skill in "using language," children are motivated to verbally express their reactions to personally significant experiences, describe objects and relationships, and have their oral expression transformed into written form (Hohmann, et al., 1988). To encourage "experiencing and representing," the teacher asks children to identify objects by using one of their senses, to imitate sounds and actions, to associate photographs and pictures with actual places and events, to engage in role playing, and to create models, drawings and paintings (Hohmann, et al., 1988). To develop skill in "classification," teachers provide the opportunity for children to explore and inquire about the characteristics of objects, observe and describe similarities

and differences of things, learn to sort and match, and notice and discuss the attributes that an object does not possess (Hohmann, et al., 1988). To develop an understanding of "seriation," teachers structure activities so that children will make comparisons, arrange several objects in order of size and describe their relationships, and combine one set of ordered objects with another by using trial and error (Hohmann, et al., 1988). To acquire "number concepts," children compare amounts of liquids and solids, arrange two sets of objects in one-to-one correspondence, and count concrete objects and shapes (Hohmann, et al., 1988). To develop an understanding of "spatial relationships," teachers plan for situations in which children must assemble and disassemble objects, observe and describe objects with respect to their relative positions, directions, and distances from one another, and explain graphic representations of spatial relationships in drawings, paintings, and photographs (Hohmann, et al., 1988). To develop concepts of "time," teachers structure experiences so that children will understand time units and intervals between events (Hohmann, et al, 1988). For this purpose, children observe changes in seasons and the passage of time on clocks and calendars. In addition, to encourage an understanding of temporal relationships, teachers provide opportunities for children to observe the sequence of events in time (Hohmann, et al., 1988). For example, children talk about and graphically represent past events, discuss and make suitable plans for future events, and

observe and describe the order in which a series of events occurred.

The team of teachers in the High/Scope Open-Framework Preschool Program engage in daily planning and evaluation sessions. During these sessions, teachers evaluate the day's activities and plan for the next day (Buckleitner, 1989). Since the High/Scope Curriculum utilizes a basically individualized approach, frequent evaluation is essential so that teachers can consider how to restructure the learning environment and plan strategies and activities to suit the special needs of each child (Buckleitner, 1989). Moreover, according to Hohmann, et al. (1988), planning and evaluation sessions "give the teaching team an opportunity to transcend their subjective feelings about a particular day" (p. 105). For example, Hohmann, et al. (1988) explain that, if a teacher feels discouraged about the outcome of a particular lesson, a team of supportive teachers can be helpful by pointing out the positive aspects of the lesson and the strategies which can be implemented to avoid the difficulties in the future.

Buckleitner (1989) recommends another type of ongoing evaluation, the "observation/feedback process" (p.9). In this type of evaluation, a supervisor provides constructive observation and feedback sessions for teachers (Buckleitner, 1989). The objective of these sessions is to encourage teachers to capitalize on their strengths and identify strategies for improving areas of weakness (Buckleitner, 1989). Buckleitner

(1989) suggests that, if a supervisor is not available for such observation sessions, teachers can observe each other or engage in self-observation by videotaping their classroom performance.

The High/Scope Open-Framework Curriculum Model is readily adaptable to bilingual and bicultural education at the preschool level. The bilingual/bicultural approach of this curriculum model is founded on two basic principles - that educational programs should enhance the child's self-esteem and pride in his cultural and linguistic heritage and that educational programs should encourage the child to speak in his native language as well as to learn the dominant language of the school (Hohmann, et al., 1988). Therefore:

> A bilingual program is not a melting pot ... wherein children assimilate the dominant culture as quickly as possible. A bilingual/ bicultural program should be geared to help children learn to function successfully in both the dominant culture and their "minority" culture, and to become fluent in two languages (at least) by the time they have finished school. (Hohmann, et al., 1988, p. 11)

The Open-Framework Curriculum Model subscribes to a naturalistic approach to language instruction whereby the development of language skills is an ongoing process and an inherent part of all activities (Hohmann et al., 1988). According to Hohmann, et al. (1988), "... language learning is in the context of work and play rather than in the context of a lesson" (p. 12). When a naturalistic approach to language instruction is applied to bilingual/bicultural education, both the child's native language and the dominant language of the

school are spoken throughout the school day (Hohmann, et al., 1988). In this way, the child learns that both languages merit equal respect and acceptance.

The High/Scope Preschool Program aims to encourage each child to feel proud of his cultural heritage. The members of the teaching staff understand that a child's self-image is influenced to a great extent by the manner in which other people react to him and to the culture he represents (Hohmann, et al., 1988). Therefore, according to Hohmann, et al. (1988), proponents of the Open-Framework Curriculum Model advocate "... a culturally relevant curriculum" (p. 13) which develops feelings of self-worth and fosters favorable attitudes toward learning and toward other people and other cultures.

A major objective of the High/Scope Open-Framework Preschool Curriculum is to encourage multiculturalism which signifies "... understanding and appreciating more than one cultural heritage and functioning comfortably within more than one cultural context" (Hohmann, et al., 1988, p. 13). In the High/Scope approach to preschool education, children develop the spirit of multiculturalism as they interact with one another during the course of everyday experiences rather than as a result of formal lessons about people from other times and places (Hohmann, et al., 1988).

In order to foster pride in the child's cultural heritage, teachers investigate and and demonstrate an appreciate for the cultural values and attitudes which exist within the individual

families and within the community setting of the school (Hohmann, et al., 1988). In addition, teachers avoid the introduction of cultural stereotypes in the classroom. Hohmann, et al. (1988) explain that "... one way to assure continuity between home and school and to avoid cultural stereotyping is to have parents and other community members work in the classroom" (p. 13). Thus, parents and the community play an important role in the implementation of the High/Scope Curriculum. According to Schweinhart (1988), the conviction that parents and teachers are "... both experts in their own domains is essential to the success of the program" (Schweinhart, 1988, p. 47). Schweinhart (1989) enumerates four types of "key experiences" for parents, namely, appreciating that parenting is teaching, taking an active part in the classroom program, participating in parent-staff sessions, and learning about child development and the preschool curriculum.

In an Open-Framework preschool classroom, parents and other members of the community function as resource people and "linguistic and cultural models" (Hohmann, et al., 1988, p. 14) for the children. These adults, regardless of their language or cultural heritage, share in the planning and implementation of the preschool program. Thus, they "... all represent equally respected roles for the children" (Hohmann, et al., 1988, p. 14).

The children also serve as resource people and as linguistic and cultural models for each other. The principle of mixed

language grouping, as well as mixed age and ability grouping, is applied so that children learn from one another (Hohmann, et al., 1988). In a situation where this type of heterogeneous grouping prevails, children continue to progress in their native language, while they begin to master a second language as a result of social interaction with peers and adults (Hohmann, et al., 1988). Moreover, a child's learning does not have to be delayed until he has mastered the new language (Hohmann, et al., 1988).

In the bilingual/bicultural educational approach of the High/Scope Preschool Program, the fundamental principles of the Open-Framework Curriculum Model apply to the culturally different child as they do to all children (Hohmann, et al., 1988). Indeed, the ideals of active learning and "developmentally appropriate activities" (Hohmann, et al., 1988, p. 15) which are planned around the eight "key experiences" are consistently upheld with all children. However, according to Hohmann, et al. (1988), it is "... the cultural and linguistic context that varies" (p. 15). Thus, the success of the High/Scope Open-Framework approach to bilingual/bicultural education is attributable both to the sound principles of learning upon which it is based as well as to the naturalistic approach to language instruction, the concept multiculturalism based on firsthand experiences, linguistic and cultural modeling by adults, and the ideal of mixed age, ability, and language grouping to which it subscribes.

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Hohmann, M., Banet, B., & Weikart, D. P. (1988). Young children in action. Ypsilanti, MI: High/Scope Press.

Young Children in Action is a comprehensive guide to the High/Scope Preschool Cognitively Oriented Curriculum, which exemplifies the Open-Framework Curriculum Model. The authors of this book discuss the developmental theory of Jean Piaget and its implications for early childhood education. They explain the unique attributes of the preschool child which must be considered when planning a preschool program. They describe the developmental changes which are characteristic of early childhood, including the special abilities and limitations which are typical at the various stages of growth and development. The authors contend that the High/Scope Preschool Curriculum is designed to provide a high quality preschool experience for young children. The authors of this book present many useful suggestions for planning and implementing the High/Scope Curriculum. They provide detailed explanations which relate to the physical arrangement of the classroom, planning the daily routine, team teaching, Key Experiences as the framework for developing cognitive and social skills, teaching strategies and activities, and the use of checklists as a method of child observation. The authors place special emphasis on adapting the High/Scope Cognitively Oriented Curriculum for teaching bilingual, economically disadvantaged, and handicapped children.

Schweinhart, L. J. (1988). A school administrator's guide to early childhood programs. Ypsilanti, MI: High/Scope Press.

This book is written especially for those educators who wish to implement an early childhood program for economically disadvantaged youngsters in a public school setting. This guide presents current information about the components of high quality early childhood programs. The features of the following preschool curriculum models are discussed in detail: The High/Scope Curriculum, Direct Instruction, Diagnostic-Prescriptive Special Education, The Gesell Institute Approach, The Montessori Method, The Madeline Hunter Approach, and The Effective Schools Movement. The authors of this book provide the school administrator with the background of information he must have in order to initiate and conduct a successful preschool program for economically disadvantaged youngsters. In addition, they present specific suggestions for amassing support for the program from staff members, parents, school board members, and the public-at-large.

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This resource guide presents a series of articles written by leaders in the field of early childhood education. One very timely article, which deals with current trends and issues in preschool and kindergarten education, describes the unique challenges which face preschool educators today. A second article explains the implications of current research for designing early childhood programs. An article by David Weikart deals with the unique features of high quality preschool programs. Weikart emphasizes those components of the High/Scope Cognitively Oriented Curriculum which represent the current state of the art of this instructional approach. An article by Carnine, Carnine, Karp, and Weisberg presents the role of direct instruction in educating the economically disadvantaged child in today's society. These authors provide specific examples of curriculum content and teaching strategies which are in current practice. They also present up-to-date research which refutes much of the criticism of direct instruction for preschool children. In a final section of this book, Warger provides detailed descriptions of numerous early childhood programs which are currently being implemented in the public schools. The names and addresses of persons to contact for additional information about these programs are also included.

NEEDS ASSESSMENT

Current educational research presents an abundance of information dealing with compensatory preschool education. The many excellent textbooks and journal articles on the subject provide a strong rationale for high quality early intervention programs for economically disadvantaged youngsters. In addition, there are numerous comparative studies designed to evaluate the relative effectiveness of the three preschool curriculum models which are the subject of this paper. However, a judicious and objective review of the literature does reveal some components of experimental design which require improvement and several aspects of the topic in which research is lacking. Therefore, the discussion which follows will consider limitations in the experimental design of research on the subject of curriculum models for economically disadvantaged preschoolers. This discussion will also consider those aspects of the subject which have either been omitted from the literature or which have not been studied in sufficient depth. Finally, this discussion will include assessments by researchers in the field of early childhood education which relate to improvements needed in the design and implementation of the preschool curriculum models under consideration.

According to Carnine, Carnine, Karp, and Weisberg (1988), the experimental design of research studies which relate to educational policy should adhere to several fundamental

guidelines. First of all, the subject sample should consist of a sufficiently large number of representative students who are randomly assigned to either the experimental or the control group of the study (Carnine, et al., 1988). Moreover, data collection and analysis should be conducted by impartial and independent agencies (Carnine, et al., 1988). In addition, an ideal experimental design for educational research necessitates a representative, naturalistic research setting and objective and reliable measures for drawing conclusions (Carnine, et al., 1988). Carnine, et al. (1988) find that research studies which deal with preschool curriculum models are often deficient in achieving these standards. For example, Carnine, et al. (1988) are critical of several aspects of the experimental design of the High/Scope Preschool Curriculum Study, and they advise that planners of compensatory preschool programs exercise caution in drawing conclusions and implications on the basis of its results. These researchers charge that the findings of the High/Scope Curriculum Study were based on a relatively small subject sample and that only twelve children completed both years of the Direct Instruction Curriculum component of the study. Moreover, they argue that the study was administered by David Weikart, the chief advocate of the Cognitively Oriented Open-Framework Curriculum, and that the programs were put into effect by teachers who were hired by Weikart. Furthermore, Carnine, et al. (1988) assert that the High/Scope Study was conducted in a model, laboratory school

rather than in a naturalistic setting and that the major conclusions were based on subjective self-reported information derived from the students.

Lawrence J. Schweinhart (1989), a spokesman and proponent of the High/Scope Curriculum Study, agrees that many longitudinal studies designed to evaluate compensatory preschool curriculum models have not achieved some of the criteria for effective educational research, namely, a sufficiently large sample of representative children, a completely random assignment of subjects to groups, exact program replication, and minimal sample attrition. Moreover, Schweinhart, Weikart, and Larner (1986) remind early childhood educators that, with respect to the High/Scope Curriculum Study, the subject sample was limited to poor children at risk of school failure. Therefore, these researchers advise that, although the results of this study are extremely valuable in designing preschool programs for economically disadvantaged youngsters, the findings may not be applicable in designing early childhood programs for the general population of preschool children.

Zigler (1986) expresses reservations about the generalization of findings from the Perry Preschool Study to typical preschool programs in the public schools. He doubts the likelihood of duplicating the high quality of the Perry Preschool Program in a public school setting. Indeed, according to Zigler (1986), "... the program's experimental character ensured that it would be exceptionally well planned, monitored,

and managed" (p. 142). Zigler (1986) finds that a second limitation of the Perry Preschool Project is that the subject sample was not representative of the population of economically disadvantaged children. He explains that the subject sample of this study consisted exclusively of black children, although the majority of low-income children are Caucasian. Moreover, Zigler (1986) questions whether the subject sample of the Perry Preschool Study was even representative of the population of low-income black children. He explains that the black children who qualified for participation in this study had IQ scores between 61 and 88, whereas the median IQ score of low-income black children in the United States was between 80 and 85 at the time the study was initiated. In addition, Zigler (1986) determines that there was a significant difference between the control and experimental groups with respect to maternal employment. In order to be a member of the experimental intervention group, the child had to have a mother who was at home during the day and who could take part in the home visit component of the study. This criteria was not applied to the non-intervention control group of youngsters. Thus, control of the critical variable of the mother's daytime presence in the home was not achieved. Furthermore, Zigler (1986) questions the validity of having as primary data collectors for the Perry Preschool Study residents of the community who had close friendships and relationships with the families who participated in the study. Finally, Zigler (1986) charges that since

participation in the Perry Preschool Study was completely voluntary, "... a self-selection phenomenon" (p. 142) resulted. According to Zigler (1986), this factor limits the generalizations which can be derived from the Perry Preschool Study because "... how families that did not choose to volunteer differed from the final project sample is an open question" (p. 142). Schweinhart and Mazur (1987) agree with Zigler (1986) on this point. According to Schweinhart and Mazur (1987), evaluations of prekindergarten programs are most valuable when their experimental design requires that participation in the program be determined by objective standards established by the researchers. Schweinhart and Mazur (1987) assert that parents who elect to enroll their children in a program have different motivations and values than those who do not and that "... these differences can either magnify or mask real program effects" (p. 19). Schweinhart and Mazur (1987) suggest that one way to avoid Zigler's (1986) "self-selection phenomenon" (p. 142) is to choose the participants of both the experimental and the control groups of a study at random from a waiting list.

Because of the very nature of the subject of compensatory preschool curriculum models and because of the many factors which may contribute to their relative effectiveness, it is often quite difficult to achieve satisfactory control of all of the relevant variables in a given study. Weikart and Schweinhart (1987) state that a preschool program is composed of an unlimited number of components and variables. These

educators explain that "... even at the level of basic curriculum features and program policies, dozens of variables can be identified" (p. 265) and that "... one might hypothesize that any one of these variables is responsible for the effects of a preschool program" (p. 265). Thus, when evaluating preschool curriculum models, the existence of an unlimited number of relevant variables generates questions about which features of each particular curriculum model might have been most significant in influencing the results of a study. For example, according to Weikart and Schweinhart (1987), one might wonder whether the teacher-child ratio, the curriculum emphasis, or the extent of parental involvement might have been responsible for the success of a particular preschool program. Powell (1986) also discusses the difficulties of curriculum comparison due to the numerous variables which may be operating in a given study. According to Powell (1986), "... a major limitation of curriculum comparison studies is that they confound content, activities, and materials with teaching techniques" (p. 211). Thus, it is difficult to ascertain whether program content, teaching methods, or some other feature of the program is responsible for the outcome of a study. Similarly, in evaluating studies which assess the effectiveness of the Direct Instruction Curriculum Model, Gersten (1985) finds problems in attaining control of the relevant variables and, thus, explains that it is difficult to determine which aspects of the curriculum model are most significant in achieving benefits for the student.

For example, Gersten (1985) asserts that, in studies which reveal improvement in academic performance due to direct instruction, it is unclear whether the positive effects of direct instruction are due to the curriculum content, the teaching methods prescribed by the program, or to a combination of factors. Powell (1986) agrees with Gersten (1985) that, in research studies which indicate positive results of structured academic preschool programs, little effort has been made to ascertain whether the favorable outcomes are related to the academic emphasis or to teaching techniques such as drill, immediate correction of errors, or extensive positive reinforcement.

With respect to the evaluation of child outcomes as a result of participation in a preschool program, many researchers believe that there is a need for improvement in the choice, validity, and reliability of assessment instruments and strategies used by researchers. For example, Weikart (1989) is critical of some of the screening procedures and instruments for evaluation which are used in assessing the effects of compensatory preschool curriculum models. Thus, he calls for "... new measures that are developmentally appropriate for young children and that adequately assess challenging new curriculum methodologies that lay foundations for appropriate adult behavior" (p. 29). Moreover, Schweinhart and Mazur (1987) charge that, in evaluating the relative effectiveness of compensatory preschool programs, many researchers have depended almost exclusively on tests of academic achievement and have disregarded observational and

sociometric techniques. Schweinhart, et al. (1986) emphasize that "... we cannot continue to excuse an almost exclusive focus on the use of intellectual and academic measures for program effectiveness because measures of social competence are elusive" (p. 54). In evaluating the effectiveness of preschool curriculum models, Schweinhart and Mazur (1987) advise the use of systematic direct observation in a naturalistic setting, case studies of children over time, teacher ratings, tests of intellectual potential, and developmental records and reports of placement decisions in addition to tests of academic achievement. Schweinhart (1987) urges educators to consider the non-academic values of preschool programs. He contends that the "... nearly exclusive reliance on standardized achievement tests as measures of educational success is not conscionable in today's problem ridden society" (p. 8) where social and emotional skills are so crucial.

Finally, Rashid (1985) is critical of the fact that, thus far, research has defined program quality in predominantly quantitative rather than qualitative terms. Rashid (1985) believes that, in order to present a useful, workable definition of program quality in early childhood education, "... future research efforts must extend beyond the limitations imposed by the quantitative paradigm" (p. 60). He contends that the essence of program quality incorporates both quantitative and qualitative features and, thus, a functional, practicable definition of program quality must necessarily include both

quantitative and qualitative aspects in its design.

There are several aspects of the subject of compensatory preschool curriculum models in which research is lacking or which have not been studied in sufficient depth. Therefore, the discussion which follows will consider additional research which is needed in the area of preschool education for economically disadvantaged youngsters. According to Schweinhart, et al. (1986), additional longitudinal studies are needed to assess the long-term effects of both teacher-directed and child-initiated curriculum approaches in early childhood education. Moreover, Schweinhart, et al. (1986) contend that long-term assessments "... to uncover unintended consequences or undesirable side-effects of programs" (p.55) are essential. Thus far, comparative studies, such as the High/Scope Preschool Curriculum Study, have indicated that academically-focused direct instruction approaches may be ineffective in diminishing social and behavioral problems which children will encounter in later years (Schweinhart, et al., 1986). However, these findings have yet to be substantiated by an adequate body of research dealing with the consequences of early childhood programs. Therefore, there is a need for more research to evaluate the long-term effects of teacher-directed learning methods in early childhood education (Schweinhart, et al., 1986). Indeed, "... replicative longitudinal studies are essential, with close attention to differential curriculum effects on antisocial behavior during the elementary school years" (Schweinhart, 1987,

p. 7). According to Schweinhart (1989), if the results of the High/Scope Study are to be considered conclusive, the studies which relate to teenage pregnancy, unemployment, welfare, school achievement, and police arrests must be replicated in other studies.

Although many studies have been conducted to compare the effectiveness of compensatory preschool curriculum models, few studies have been implemented to identify the specific components of the curriculum models which are most influential in enhancing the academic, social, and emotional skills of economically disadvantaged children (Powell, 1986). Therefore, Gersten and Woodward (1985) call for research to identify the features of successful preschool programs, to determine those components which are most beneficial, and to reveal those aspects which should be modified or changed. Schweinhart (1989) agrees that further research is needed to study the effects of curriculum model components. He also seeks research to determine the results of curriculum supervision and staff training methods, administrative procedures, staff turnover rates, and parent involvement efforts.

At this point, it should be noted that there is very little research which relates to beneficial curriculum approaches and teaching methods for children from families other than those living at or below the poverty level (Powell, 1986). Powell (1986) contends that the wealth of research which deals with preschool curriculum models for economically disadvantaged

youngsters is very often not applicable to children from middle-class families. Similarly, Schweinhart (1987) asserts that there is insufficient "... evidence on preschool program effectiveness for children who are not poor or otherwise at risk of school failure" (p. 2). Therefore, more research is needed to evaluate the benefits of early childhood programs for middle-class youngsters (Schweinhart, 1989).

According to Powell (1986), a review of literature dealing with preschool programs for disadvantaged youngsters reveals "... the narrow range of outcome areas considered in program evaluations" (p. 214). Powell (1986) finds that studies which relate to the effects of compensatory preschool programs have over-emphasized academic outcomes. Therefore, he urges that future studies focus on social skill and attitudinal outcomes. Finally, Powell (1986) advises that, instead of looking for the one best preschool curriculum model for economically disadvantaged youngsters, "... our energies should focus on finding the best match between child and program" (p. 214). Schweinhart and Mazur (1987) elaborate on this point. These educators state that future research should carefully evaluate the "curriculum style" (p. 19) of compensatory preschool programs to ascertain whether the curriculum objectives and teacher-initiated activities are suitable for the developmental level of the children, to determine the extent to which developmentally appropriate curriculum objectives are accurately reflected in classrooom activities, and to establish the

frequency with which child-initiated activities are encouraged by the teachers.

The advocates of teacher-directed learning express the need for additional research which relates specifically to the Direct Instruction Curriculum Model. Gersten, Carnine, and Keating (1984) call for longitudinal studies to investigate arguments by those who oppose Direct Instruction for preschoolers. For example, Gersten, et al. (1984) state that there is a need to confirm or deny the contention that, when the carefully-sequenced lessons and extensive teacher guidance of direct instruction preschool programs are phased out in later years, the beneficial effects of this curriculum model will gradually disappear over time. Moreover, Gersten, et al. (1984) seek research to determine the benefits to be derived for economically disadvantaged children of extending Direct Instruction beyond the preschool level to the sixth or eighth grade.

With respect to the Direct Instruction Curriculum Model, Gersten, Woodward, and Darch (1986) believe that "... future research should compare different instructional sequences that have been developed to teach explicit strategies and identify those sequences that are best, most effective" (p. 30) in developing a variety of skills and abilities. Similarly, Gersten (1985) explains that research is needed to provide current information about the teaching practices and curriculum components of Direct Instruction which are most effective. He

calls for observational studies to identify teaching methods, such as correction procedures, questioning strategies, presentation rate, and instructional formats, which are instrumental in achieving optimum outcomes. According to Gersten (1985), studies of this nature would be very useful in determining the vital components of Direct Instruction which are most beneficial for economically disadvantaged youngsters. Furthermore, Gersten, Carnine, and Woodward (1987) believe that research is needed to discover what constitutes an effective training program for teachers using Direct Instruction, how to design improved instructional materials for Direct Instruction, and how technology can help teachers carry out the more difficult strategies of effective Direct Instruction. Similarly, Tingey-Michaelis (1986) contends that systematic study is needed to determine the extent and type of training and supervision that teachers require to successfully carry out a Direct Instruction program for preschoolers and to ascertain how the degree of structure inherent in the program influences child outcomes other than those that are academic in nature. Moreover, Tingey-Michaelis (1986) calls for research to disclose screening methods which will successfully discriminate between those children who learn best from teacher-directed methods and those children who learn best from child-initiated approaches. Finally, Tingey-Michaelis (1986) seeks research to determine whether it is possible for a single program "... to provide structured learning experiences for

some children and nonstructured learning experiences for other children" (p. 295).

Many teachers and administrators are reluctant to implement the Direct Instruction Curriculum Model with young children. Thus, proponents of Direct Instruction emphasize the need to publicize the benefits of this curriculum model and dispel the misconceptions about its instructional strategies and philosophy of learning. According to Mathes and Proctor (1988), teachers must have the opportunity to actively work with Direct Instruction over an extended period of time in order to appreciate the favorable results of this instructional approach and overcome their skepticism about it. Indeed, Mathes and Proctor (1988) have found that "... Direct Instruction cannot be fully evaluated by reading descriptions of it, looking at the materials or, even, observing it being used" (p. 97). They contend that such passive experiences with Direct Instruction often result in undue concern about the structure and regimentation of this curriculum model. Therefore, Mathes and Proctor (1988) advise a "hands-on" in-service training program so that teachers will fully comprehend how to implement the program and experience the gratification of student achievement and success.

The results of research in the field of compensatory early childhood education present a needs assessment which relates to improvements in the design and implementation of preschool curriculum models. In general, advocates of the Open-Framework

Curriculum Model have concluded that high quality early childhood programs should involve extensive parental involvement, intensive and supportive leadership by supervisors and directors, a well-trained and highly-motivated teaching staff, a curriculum based on sound instructional principles, an effective in-service training program, and constructive feedback which results from on-going program evaluation (Schweinhart, Berrueta-Clement, Barnett, Epstein, & Weikart, 1985). According to Weikart (1988), research indicates that, when planning preschool programs for economically disadvantaged youngsters, educators should aspire to achieve the following characteristics of curriculum, staffing, and child and family services. First of all, the curriculum model should be based on principles of child development which have been carefully evaluated and judged to result in positive academic and social outcomes (Weikart, 1988). In addition, administrators should strive for an ideal teacher-child ratio of one to ten (Weikart, 1988). Moreover, the teaching staff should consist of early childhood specialists who are carefully supervised by an experienced curriculum coordinator (Weikart, 1988). Furthermore, there should be "... support systems to maintain the curriculum model, including curriculum leadership by administration, curriculum-specific inservice training, supervision and evaluation procedures, and teaching staff assignments that permit daily planning and evaluation of program activities" (Weikart, 1988, p. 71). The teaching staff and parents should work together as partners who are intimately

involved in the education and development of the children (Weikart, 1988). Finally, teachers of economically disadvantaged preschoolers should be alert and responsive to the children's health and nutrition needs and to family needs for child care and other support services (Weikart, 1988).

In a discussion of critical choices which the planners of compensatory preschool programs must make in the future, Weikart (1989) urges educators to "recognize that the curriculum we use to organize our interaction with children is the major factor that determines the child's social development" (p. 28). Weikart (1989) presents the following needs assessment for designing a preschool curriculum which incorporates the findings of educational research. According to Weikart (1989), the curriculum content should be founded on a well-respected theory of child development and should emphasize child-initiated learning. In addition, the curriculum should be suitable for children with special needs, such as economically disadvantaged children and children with mental, physical, and emotional handicaps (Weikart, 1989). Moreover, the curriculum should be evaluated for effectiveness in a variety of settings and substantiated by longitudinal research studies which assess its impact over time.

NEW DIRECTIONS

In response to the needs of an increasing percentage of young children in our country who are living in poverty, the number of compensatory early childhood development programs is rapidly mounting. These compensatory preschool programs are designed to provide both educational and support services to economically disadvantaged youngsters and their families. The federal government is the major source of public funding for these programs (Schweinhart & Weikart, 1986). However, funding from state, county, and city governments and from local school boards is currently on the rise (Schweinhart & Weikart, 1986). According to Schweinhart, Koshel, and Bridgman (1987), "... The momentum for early childhood programs remains strong. State legislatures and other policy-making bodies in the United States seem more willing than ever to consider investing in high quality early childhood programs" (p. 30). Washington (1988b) confirms that an increasing number of state legislatures are prepared to provide public funding for compensatory preschool programs, and Jorde (1988) adds that the current trend in early childhood education is toward a return to local control.

Gnezda and Sonnier (1988) note several trends in legislative policy-making at the state level which relate to compensatory early childhood programs. One of these trends is a growing financial commitment to early intervention programs thoughout the nation (Gnezda & Sonnier, 1988). Indeed, approximately

half of the states now provide public funds to preschool programs (Gnezda & Sonnier, 1988). There is also a trend toward using sites and locations other than public schools for early childhood programs (Gnezda & Sonnier, 1988). Moreover, legislators are becoming more and more interested in "... coordinating the schools and the child care community in the administration of programs" (Gnezda & Sonnier, 1988, p. 40).

Weikart (1989) cites several trends which indicate renewed support for and interest in preschool programs for economically disadvantaged children. First of all, he confirms that legislators are frequently introducing bills to launch new preschool programs and to increase funding for compensatory preschool education at the city, state, and federal levels of government. In addition, he states that editorials often appear in leading newspapers to publicize the issues in and the need for early intervention programs. Moreover, he asserts that major figures in industry and commerce are proclaiming their endorsement of preschool programs for children from low-income families. Finally, he points to the abundance of current educational research which supports the establishment of high quality compensatory preschool education. Similarly, Gnezda & Sonnier (1988) point out that, on the basis of research studies which reveal the benefits of high quality early childhood programs, many state legislators are eager to support the funding of preschool programs for economically disadvantaged children at risk of school failure.

Changes in the racial and ethnic composition of our country are resulting in a surge of interest in and a greater demand for compensatory preschool programs. Weikart (1989) states that, in addition to our growing Black population, there are increasing numbers of Asian and Hispanic immigrants living in our nation. Thus, the number of young children who are members of minority groups is steadily rising. Moreover, Weikart (1989) finds that the likelihood that members of Hispanic and Black minority groups will experience problems such as poverty, unemployment, teenage pregnancy, and crime is very high. The current trend within the government and business sectors is to look to education, especially high quality early childhood education, to improve the plight of these minority groups (Weikart, 1989). According to Jorde (1988), our society views "... early education as the most promising vehicle for preventing poor academic performance" (p. 60) among students who are living in poverty. Similarly, Washington (1988a) contends that, as a result of the increasing percentage of Black and Hispanic children who come from lower-class and working-class families, there will be a greater need for compensatory preschool programs during the next decade. According to Washington (1988a), "... the expanding proportion of Black and Hispanic children challenges early educators to devote explicit attention to maximizing the cognitive and social skills of children in ways compatible with cultural diversity" (p. 52). Washington (1988b) predicts that, in the next decade, early childhood educators will face the challenge of assisting

a rapidly growing number of young children from minority ethnic and racial backgrounds overcome the consequences of poverty.

Early childhood education involves several new dimensions which are designed to meet the special needs of disadvantaged children and their families. For example, the establishment of the full-day kindergarten is one of the most significant current developments in preschool education (Washington, 1988b). Moreover, to accommodate mothers who must work to support their families, compensatory preschool programs are instituting before-school, after-school, summer care, and enrichment components (Perrone, 1988). In addition, early intervention programs for disadvantaged preschoolers are becoming wider in scope by including health, nutrition, and family support services (Perrone, 1988). Jorde (1988) agrees that the trend in compensatory preschool education today is toward "... a distinctly multi-disciplinary approach" (p. 60) which involves not only the field of education, but also the fields of psychology, sociology, anthropology, nutrition, pediatrics, social work, and family welfare.

With respect to curriculum content and instructional approach in early childhood programs for economically disadvantaged youngsters, the academically-focused Direct Instruction Curriculum Model, the developmentally-oriented Open-Framework Curriculum Model, and the child-centered traditional nursery school approach continue to be represented in the schools. According to Hechinger (1989), there are those

educators who are demanding that formal academic subjects, including reading, writing, and arithmetic, be taught to three and four year-old youngsters in nursery school. In addition, Schweinhart and Weikart (1988) contend that "... As a result of the recent educational reform movement, students must demonstrate higher standards of academic performance" (p. 223) not only at the high school level but also down through the elementary grades to the kindergarten and nursery school levels. These researchers find that many states and school districts are instituting increasingly stringent requirements at each grade level, including the preschool level.

On the other hand, Jorde (1988) reports that many preschool educators are convinced that, when young children are taught by a highly-structured, academically-focused instructional approach, there will be unfavorable repercussions. Schweinhart and Weikart (1988) agree that many early childhood educators are currently resisting the pressure to bombard three and four year-old youngsters with instruction which is highly-academic in focus. According to Schweinhart and Weikart (1988), teachers view this Direct Instruction approach "... as an intrusion of academic structure into the lives" (p. 223) of very young children. Early childhood educators who oppose a strong emphasis on academic instruction at the preschool level are receiving support from current educational research. Hechinger (1989) cites a new study entitled "Academic Environments in Early Childhood: Challenge and Pressure" which indicates that children

who were "... subjected to formal teaching at such early ages tended to be less creative when they entered school, registered more anxiety about tests, and soon lost the academic advantage with which they started elementary school" (p. B 11). Although the subjects of this study were middle-class youngsters, Hechinger (1989) asserts that these findings also apply to the early education of economically disadvantaged youngsters. Moreover, in a personal letter to the author of this research paper, Russell Gersten, a prominent researcher and a leading proponent of Direct Instruction, acknowledges that many early childhood educators are "... against systematic language and reading instruction in preschool." Gersten believes that "... this trend is unfortunate" and wishes that "... parents of low income students would be interviewed so we could get their perspective."

The most significant and promising trend in curriculum design for economically disadvantaged preschoolers involves an instructional program which integrates components of the academic approach and the developmental approach (Gersten, Darch, & Gleason, 1988). Such a program, which is based on validated principles of effective instruction and child development, incorporates both teacher-directed academic activities and childinitiated activities (Gersten, et al., 1988). This approach to preschool education is governed by respect for the child's current stage of development and confidence in his ability to achieve his potential (Schweinhart & Weikart, 1988). According

to Hechinger (1989), in this ideal preschool curriculum model, children are encouraged to experience "... the joy of new knowledge and unpressured learning" (p. B 11). Moreover, Jorde (1988) concludes that "... Most child development experts agree that the emphasis must be on developing a broad-based competence in the young child, involving those capacities or processes, cognitive, social, emotional, and physical, which determine effective functioning in a wide range of situations" (p. 63).

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This book contains a collection of articles written by experts in the field of early childhood education. These articles deal with the scope and future direction of preschool programs which are currently being practiced and implemented in the schools. The introductory articles of this book involve the historical perspectives of early childhood education. Following this historical overview, there are several informative essays which discuss policy decisions about present and future issues, especially those of economic, social, and philosophical importance. Next, in the section which deals with issues, trends, and directions, unanswered questions and sources of controversy and choice are explored. The major sections of this book describe the nature, quality, and curriculum content of current early childhood programs, the findings of research thus far which relate to high quality preschool programs, topics and questions which should be evaluated in the future, and the vital role of parental involvement and partnerships between teachers and parents in early childhood programs.

Hechinger, F. M. (1986). A better start: New choices for early learning. New York: Walker and Company.

The articles in this book represent the collaborative efforts of highly-respected specialists in the field of early childhood education. The basic theme of these articles is that early intervention programs should be made readily available to all children living in poverty in order to improve their life chances and to benefit society-at-large. The first group of articles presents research which documents the efficacy of implementing high quality early childhood programs to enhance the academic, emotional, and social development of economically disadvantaged children. A second group of articles includes descriptions of successful high quality early intervention programs which are in current practice. A third group of articles emphasizes the importance of parental support and involvement in early childhood education and presents specific suggestions about what parents can do to help their preschoolers at home. Finally, a fourth section of this book contains articles which caution educators to avoid overemphasizing academic aspects of development at the expense of emotional and social aspects of development during the early childhood years.

Schweinhart, L. J., & de Pietro, L. (1988). Shaping the future for early childhood programs. Ypsilanti, MI: High/Scope Educational Research Foundation.

This timely book explores the scope and future direction of today's preschool programs in light of the current surge of public interest and concern about the needs and problems of young children. The authors describe how early childhood programs are developing across the nation and examine some of the issues that are arising as programs for children receive more and more attention from the political scene. The articles of this book represent a collection of presentations from a recent High/Scope policy conference. These articles offer both controversial viewpoints and data from recent research on current issues and questions such as the following: What should be the role of the states, public schools, and federal government in providing early childhood programs? How are state and public school preschool efforts expanding? Does day care help or hinder children's intellectual development, social development, and health? Are expanded public preschool efforts meeting families' day care needs? What is the role of day care in welfare reform? Are public school programs fair to minorities? and How will the movement of preschool into the public schools affect program quality?